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ABSTRACT

This is a comprehensive report of the effects of local school programs, K-12, developed with funds from ESEA Title I, the State Educationally Disadvantaged Youth (EDY) Act, and the Early Childhood Education (ECE) reform effort during 1974-75. The program description defines outputs, both in terms of institutional changes and in terms of student achievement, as well as reports on the legislation and regulations under which the programs have operated. The next section is a detailed descriptions of the procedures followed and the instrumentation used to measure these outputs. The findings of the evaluation contains detailed information about the numbers and types of participants and expenditure patterns. It also contains a discussion of the institutional changes which have resulted from the ECE reform. Since some ESEA Title I funds are being used to serve very distinct populations such as handicapped students and neglected youth, a special section about these specialized efforts is included. Among the findings are that ECE school are making major changes throughout many program areas, and that statistically, students in the ECE process achieve significantly higher than do matched groups of students not in the program. (Author/AM)

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I. Introduction to the Report

This *Evaluation Report of ECE, ESEA Title I, and EDY, 1974-75,* is a comprehensive report of the effects of local school programs, kindergarten through twelfth grade, developed with funds from the federal Elementary and Secondary Education Act (ESEA) Title I, the state Educationally Disadvantaged Youth (EDY) Act, and the early childhood education (ECE) reform effort of institutional change and student achievement during 1974-75.

ESEA Title I, EDY, and ECE each have independent goals, organizational elements, eligibility criteria, and evaluation requirements. These three largest of California's supplementary education efforts for kindergarten through grade twelve overlap, however, in general intent, specific provisions and actual participants. This statewide overlap frequently results in allocations to schools from more than one funding source. The consolidated application, designed pursuant to the provisions of Assembly Concurrent Resolution 127 (1969), provides a vehicle to bring together in a united planning effort these various state and federal supplementary funding sources, which were previously fragmented and often administered separately. Programs are defined at the local level by the school plan, and the school indicates how the various funds will be used to present a unified educational package. Because of the substantial degree of these overlaps, it has become clear that one consolidated evaluation report covering these three efforts is appropriate.

The reader should keep in mind, however, that although overlaps do exist, a comparison of the achievements in one instructional area with those in an apparently similar area is invalid; this is true primarily because varying eligibility requirements mean that very different mixes of students are involved in each effort. For this reason, the evaluation report, though consolidated, nevertheless contains separate, detailed evaluations of the achievements of students in programs funded by each of the three funding sources, and it also contains some discussion of these programs' unique features.

This report contains (1) the program description for ECE, ESEA Title I, and EDY; (2) the procedures, instrumentation, and limitations of the study; and (3) the findings of the evaluation. The program description defines the outputs, both in terms of institutional changes and in terms of student achievement, which the reform effort is attempting to accomplish, as well as the legislation and regulations under which the programs have operated. The procedures, instrumentation, and limitations section is a detailed description of the procedures followed and the instrumentation used to measure these outputs. The findings section contains detailed information about the numbers and types of participants and expenditure patterns; it also contains a discussion of the institutional changes which have resulted from the ECE reform effort. Student achievement results are presented for programs funded by ECE, ESEA Title I, and EDY. Finally, since some ESEA Title I funding administered directly by various state agencies is being used to serve very distinct groups of students in unique programs, a special section about these specialized efforts is also included.

Both a summary of this evaluation report and an appendix are available upon request to the Department of Education. The appendix, which was produced as a separate document, is an exhaustive compilation of the original data.

II. Program Description

This section of the evaluation report gives the reader a background against which to measure the effects of the three funding sources. It provides an overview of the enabling legislation for ECE, ESEA Title I, and EDY, followed by participant, funding, and eligibility requirements. The assumptions for these programs are presented, followed by an outline of the policy requirements. These requirements deal with institutional change and student achievement.

Enabling Legislation

When the early childhood education (ECE) reform effort was enacted in Chapter 1402, Statutes of 1972, the California Legislature envisioned a restructured primary education designed to assure that all students in kindergarten through third grade would receive instruction that would meet their unique needs, talents, interests, and abilities. The Legislature called for the cooperation and extensive participation of parents and the community in the education of children in these early grades. The Legislature also asked that maximum use be made of existing state and federal funds in a coordinated effort to help primary school students increase their competencies in reading, language, and mathematics skills and thus help ensure their achievement in later grades.

The state funded program for educationally disadvantaged youth (EDY) was designed to provide quality educational opportunities for students whose educational disadvantage had resulted from low family income, language barriers, and transiency. The EDY program was authorized in Chapter 1406 of the Statutes of 1972 (SB 90).

Similarly, by enacting Title I of the Elementary and Secondary Education Act (ESEA) in 1965 (P.L. 89-10, as amended), the United States Congress provided financial assistance for the augmentation of educational programs for students from low-income families. The California State Department of Education allocates and monitors basic grants of money to local educational agencies qualifying for the ESEA Title I funds.

In developing a program, a local school may use one or a combination of federal or state monies for which it qualifies as long as it can provide a proper accounting of the funds from each source. In addition to the three main sources cited, the following were also sources of funds for the 1974-75 programs: Miller-Unruh Basic Reading Act; Bilingual Education Act of 1972; ESEA Title II, Phase I; and the American Indian Early Childhood Education Act.

Participants, Funding, and Eligibility

Early Childhood Education

The 1974-75 state budget provided $40 million for the support of ECE, which involved approximately one-fourth of California's student population in kindergarten through grade three. On approval by the State Board of Education of a school's proposed program, ECE money was granted for a school on the basis of $130 per student in kindergarten through third grade, with an extra $65 each for up to 25 percent of the kindergarten through third grade students who were in the lowest quarter in achievement.

An elementary school became an ECE participating school as a result of a lengthy planning process. Districts were asked to establish priorities and a master plan for the phase-in process prior to the submission of the 1973-74 school plans.

In each year, half the ECE funds for any one participating district must go to those individual schools in the district which have the greatest educational need. "Educational need" is defined as the percentage of students scoring in the lowest 25 percent on a standardized, norm-referenced mathematics or reading achievement test. In the first (1973-74) school year of ECE implementation, 12 percent of the students in any district in kindergarten through grade three (K-3) were eligible for funding. If a given district's single lowest achieving school contained less than 12 percent of the district's total K-3 enrollment, the district could then bring in any other school to make up the difference (but not if the combined K-3 enrollment of the two schools exceeded the 12 percent ceiling). Since this mechanism meant that many very small school districts could each bring in only one school, more than half the first year ECE schools were low-achieving ones. "Schools" should not be confused with "children," however. Though each low-achieving school necessarily had a large number of individually low-achieving children, ECE served *all* the school's K-3 students, including the higher-achieving ones. Because ECE serves all children in a school, ECE outcomes can be expected to be higher than those for ESEA Title I and EDY programs, which serve only specially identified participants in each school In ECE schools these special populations continue to receive services from ESEA Title I and/or EDY monies.

Consistent with the ECE policy of rewarding those districts with the best overall performance ratings, the actual total amounts approved for the second year varied from 12 to 30 percent of the K-3 students in any one school district. The highest rated districts were allowed to expand 18 percent; other districts received varying amounts down to 4 percent, and others received no expansion funds. In the second (1974-75) year of ECE operation, a total of 22 percent of all K-3 students were included in the reform effort.

The ECE legislation requires that each participating ECE school be evaluated and given a composite score based on a quantitative estimate of the degree and success of program implementation, pupil progress, and fiscal expenditures. Table 1 shows the factors examined and their weights in each successive year of program implementation.

TABLE 1

Factors Rated in ECE Schools, with Weights Assigned Each Factor for 1974-75

Factor rated	Weight given to factor rated, expressed as a percent, by year of participation		
	First year	Second year	Third year
Degree and success of program implementation	70	50	50
Quantitative estimate of pupil progress	10	40	50
Fiscal expenditure	20	10	0

ESEA Title I

Title I of the Elementary and Secondary Education Act of 1965 is similar in many ways to EDY, but its source of funds is federal rather than state. ESEA Title I funds, granted by Congress to California according to the eligibility of each county, are administered by the State Department of Education. Funds are allocated according to formulas based on census information and Aid to Families with Dependent Children (AFDC) program data. The formula is contained in Appendix D-1. (The appendix was prepared as a separate document and is available upon request to the Department of Education.)

Once ESEA Title I funds are allocated to a school, students to receive the services are selected on the basis of their educational need, defined to include students scoring at or below the second quartile on standardized achievement tests or those who have serious learning deficiencies because of linguistic, social, cultural, or economic isolation.

In their use of ESEA Title I funds, districts must provide extra services to participants over and above what they provide to nonparticipating students. There must be assurance that all services provided with ESEA Title I funds are significantly greater in time, type, or intensity from those offered in the district's regular program. While ESEA Title I funds may be used for students in preschool and in kindergarten through grade twelve, state regulations require that these monies should first be focused on the earliest school years in order to make the greatest impact early in a child's education. In accordance with the federal law, moreover, segregation of ESEA Title I students on the basis of race, ethnicity, religion, sex, or socioeconomic status is forbidden.

Districtwide school parent advisory councils have been mandated by the state since 1966 and have been a federal requirement of ESEA Title I since 1971. Council membership must include parents of students eligible for Title I services. While parents who work for the school district may belong to the council, parents who are not district employees must compose more than a simple majority of its membership. Advisory council functions include program planning, implementation, and evaluation.

Other special categories of students that are also eligible to receive services under ESEA Title I include handicapped students living in state institutions, American Indian and migrant students, students in state institutions for the neglected or delinquent, and students attending desegrated nonpublic schools if they live in an eligible attendance area and are educationally deprived.

Educationally Disadvantaged Youth

Educationally disadvantaged youth (EDY) funds are allocated to school districts pursuant to a formula which includes indices of bilingualism, transiency, and poverty. The formula is presented in Appendix D-2. In 1972 the California Legislature provided $82 million for each of three years of implementation. In 1974-75 approximately $4.6 million allocated to school districts was used for the implementation of EDY only programs, and most of the remaining funds were used in schools receiving other state or federal funds. Whether the program was funded only by EDY or by the combination of sources, for each EDY participant the school received between $350 and $550 total supplementary monies.

Once eligibility for EDY funding was established, districts selected those school attendance areas which had students with the greatest educational need. Need was determined principally by either the number or percent of students scoring below the twenty-fifth percentile on standardized achievement tests in reading or mathematics. Other factors relating to school attendance areas, such as incidence of bilingualism, student transiency, and poverty levels, were also used as determinants by districts in selected EDY recipient schools.

Schools were selected for EDY participation on the basis of students scoring below the twenty-fifth percentile because they were considered to have the greatest educational need, and all of the identified students were served; however, even though the focus of attention was on the students achieving at levels below the twenty-fifth percentile, students achieving above that level were also served. Under provisions of the act, EDY funds were used to serve only those students enrolled in public education programs. Through policy established by the State Board of Education, priority was given to serving students in the early grades.

In compliance with legislative requirements, the State Department of Education developed a procedure for evaluating EDY programs. An index of program effectiveness was derived from the consolidated evaluation reports submitted by districts and schools. The index was based on the extent to which the stated objectives were met, proposed activities were implemented, and students in such programs demonstrated progress in academic skills. A weighted sum of these criteria was used in the index, with the first two counting one each and the third counting twice, following which the programs were numerically rank-ordered. This ranking was designed to communicate to each program its relative standing among all EDY programs; however, it did not indicate the quality of the program according to an absolute scale. In addition, the State Department of Education rated the EDY programs on an absolute basis of overall program effectiveness. The index scores, the relative rankings, and the complete consolidated evaluation reports were considered in making a professional judgment as to which EDY programs were of "low effectiveness" in 1974-75.

Assumptions of ECE, ESEA Title I, and EDY

The intent of ECE, ESEA Title I, and EDY has been to provide for increased student achievement, particularly in the areas of reading, language development, and mathematics. While ESEA Title I and EDY have addressed selected students who have had learning disadvantages, ECE has served all kindergarten through third grade students within a school. The ECE reform effort has gone beyond just changing the instructional program for selected students; it creates changes in the institution which provide a better learning environment for all students. Such institutional change results from a systematic reform of the ways in which the schools plan their programs, provide services to students, involve parents, utilize community resources, and evaluate outcomes for purposes of replanning.

It is important to note the assumptions about how to effect institutional change that underlie the ECE reform movement. Such assumptions are the basis of the requirements made of schools and districts participating in ECE.

A major assumption of the ECE reform movement is that the more clearly a school can describe what it intends to do for students and why, the greater the probability that such planned activities will take place in a timely fashion and the greater the likelihood that anticipated results will be achieved. Conversely, the greater the degree of ambiguity of the school's intent, the lesser the degree of timely implementation of planned activities and of achieving anticipated results. This type of program description is embodied in a program plan to be developed at each school by those individuals–teaching staff and parents–actively involved in the reform effort.

A second assumption is that program planning as well as efforts to implement and evaluate the planned program is enhanced by a school based advisory committee which broadens the base of decision making at the school. Such a school advisory committee is to be representative of parents, community, teaching staff, support personnel, and administrators to ensure full consideration of the various viewpoints of the school community, alternative strategies for resolving problems, and full use of all available resources.

A third assumption is that students learn best in an individualized program in which there are methods of identifying and providing for their individual needs and interests. The adult to student ratio must be low to assess adequately and to meet such needs and interests.

A fourth assumption is that the involvement of parents is vital: (1) parents are an important source of talent for implementing the program; and (2) parents' knowledge of their child's classroom experience enables them to reinforce at home that which the child is learning at school.

Requirements Relating to Institutional Change

The following were defined for the development of the ECE reform effort: broad outlines for district level planning; school level planning; needs assessment; development of program goals and objectives; comprehensive restructuring, including individualized diagnostic instruction, staff development and inservice training, parent participation, parent education, and student health needs; and finally program evaluation at the local level. (See Appendix C-9, Policy for Early Childhood Education Implementation.)

District Level Planning

Districts using a broadly representative district advisory committee with responsibility to the local governing board were responsible for developing a district master plan for ECE; conducting a districtwide needs assessment on a school-by-school basis; establishing district program goals and objectives; and planning for an orderly phasing in of the district's schools into ECE. The committee was required to include parents of primary age students and to include representation of the ethnic and socioeconomic groups present in the district population, as well as representatives of teachers, administrators, aides, support personnel, community service agencies, and the business community. A majority of the committee had to consist of parents who were not district employees.

School Level Planning

Schools, with full participation of the representative school advisory committees, were required to follow the requirements for the school-level planning process outlined by the state. The plans developed through the planning process were to include a needs assessment, school goals and measurable performance objectives, appropriate solution procedures or activities to close the gap between what was and what was desired, a plan for both process and product evaluation and feedback, a timeline of scheduled events, and a budget which showed the coordination of all resources in the school. The program plan was to consist of program components in reading, language development, mathematics, multicultural education, services for limited and non-English speaking students, staff development, parent participation, parent education, health and auxiliary services, and any other area which the school believed was appropriate to its own situation.

Needs Assessment

As a first step in planning, all schools were required to conduct a needs assessment. This assessment was to be a systematic investigation into what is, what should be, and the differences between the two, as well as an analysis of the discrepancies in the program areas just cited. The needs assessment could be done in a variety of ways, but the school advisory committee was to participate.

Program Goals and Objectives

As part of the needs assessment, each local school determined the ideal outcomes which it desired and analyzed the discrepancies. To plan for the elimination or reduction of these discrepancies, the schools were required to develop participant-based measurable or performance objectives which they wished to complete during the year.

The development of objectives led to solution procedures. These procedures were stated as activities with a schedule of events. Both process and product evaluation at the local level were further requirements for the plan. An additional requirement was a budget which illustrated the coordination of all the school's supplementary funding.

In the 1974-75 school year, each elementary school receiving ECE, ESEA Title I, or EDY funds was required to develop a plan for the use of those monies. These plans were to cover all funding sources in the school. Submission of school level plans to the Department of Education was required only of ECE schools. Schools funded only by ESEA Title I or EDY were not required to submit their plans to the Department but were to maintain them on file within the school, where a stratified random sample was reviewed.

Comprehensive Restructuring

The ECE policies defined the broad outlines of successful program areas in which the needs of students were to be assessed. The plans were to address, and the programs were to implement, the following:

1. *Individualized diagnostic instruction.* Students were to be individually observed and worked with, with knowledge of what each child could and could not do, and provision was to be made for sequential steps in his or her classroom experiences. The program was to center around instruction in language development, reading, mathematics, and multicultural education. The total learning environment and the ability to organize, diagnose, provide for continuous progress, prescribe, and document each student's progress were basic to the instructional program. An appropriate adult-student ratio of 1:10 was recommended.
2. *Staff development and inservice training.* The training of adults working with students was to center around development of those skills in the adults which were needed to carry out the program the school had designed. There was, therefore, a need for identifying the skills, planning to provide training in them, and implementing the program which was developed.
3. *Parent participation.* According to the ECE legislation, parents must be involved in all phases of the program in the planning, in the day-to-day operation of the program, and in its evaluation and modification. The opportunity for this participation must be extended to all parents, and the plan must contain provisions for ways in which to maximize parent participation.
4. *Parent education.* Parent education programs were to be developed within each ECE school and were to be based on the needs of the parents and community of the school. They were to provide training in those areas which would enable parents to be better able to participate in the school and, more importantly, in their children's own learning.
5. *Student health needs.* ECE schools were required to provide for screening/referral and follow-up of student health needs. This process was to include consideration of the community's resources available in these areas and coordination of those resources whenever possible.

Although comprehensive restructuring was not required in ESEA Title I and EDY, these programs were required to individualize instruction in reading, mathematics, and language development and to provide staff development, parent participation, parent education, and health and auxiliary services. Auxiliary services are those supportive activities and services not provided elsewhere in the program but necessary to the success of program participants. They include pupil personnel services, library and media services, and health services. All multifunded programs were required to provide auxiliary services to support the basic instructional components. The services were to be made available to participants in relation to their individual diagnosed needs.

Program Evaluation at the Local Level

All school level plans were required to include evaluation and dissemination sections. These sections were to deal with evaluation of both program implementation and student achievement throughout the year.

Requirements Relating to Student Achievement

ECE, ESEA Title I, and EDY all stress, as a major purpose, increased student achievement in basic skills, with primary emphasis on reading, language development, and mathematics. In all three programs provision was to be made for multicultural activities for students and special services for students who were non-English or limited-English speakers.

III. Procedures, Instrumentation, and Limitations

In order to evaluate fully the objectives of the programs included in this report, it is essential to examine both institutional changes and student outcomes. Conclusions based on a review of either the institutional change or of student outcomes, alone, could be significantly misleading. The information to be considered provides a picture of the program in operation and a picture of the program's results. The measurement of institutional change is a very difficult process, subject to many limitations. When a wide variety of instruments and approaches are used, however, and when other measures, such as the student outcome data, are combined with them, they constitute the most useful tool presently available for deriving a collective measurement of institutional change and providing a comprehensive picture of the program and its total effects. By necessity, this report is based on a series of measurements or examinations of carefully chosen facets of the total program. The evaluation of the whole program is therefore a collection of several separate evaluations of parts, which then fit together to provide a picture of the whole.

Several data sources were used in the evaluation of programs receiving ECE, ESEA Title I, or EDY funds. While part of the information was used to determine participant eligibility, another part was for school, district, and state-level planning and evaluation. Chart 1 shows the various data sources used in the evaluation of programs. These data sources are described in terms of: (1) type of programs involved at the local educational agency: (2) name of the instrument used to gather the data; (3) agency completing the instrument; and (4) general description of the instrument's contents.

Specific Procedures, Instrumentation, and Changes

School Level Plans

School level plans were developed during the spring of 1974 at each school receiving ECE, ESEA Title I, or EDY funding. All ECE funded schools submitted their plans to the Department of Education prior to June 1, 1974.

Every plan involving ECE was read and rated independently by two members of the Department's ECE staff. Table 2 presents the distribution of plan rating scores for all ECE schools and an indication of the areas considered. (Appendix C-7 contains a copy of the rating instrument.)

Production of the school level plans was, by itself, evidence of planning and design within the local school and was a local self-report of the completed needs assessment process. The rating of the plans provides a measure of the ways in which systematic planning could be translated to paper. The rating was not, however, necessarily an indication of the schools' ability to implement such planning.

The plan rating covered several aspects of program planning, beginning with the needs assessment process, which includes identification of problems and goals, and continuing through objectives, program description, evaluation and dissemination, and program budgeting. Sections of the rating form were of differing lengths, with the sections on program description and evaluation and dissemination having the most items and thus making the greatest contribution to the total score. These sections were also the most highly correlated with the total score and included such questions as this: "Has the instructional program adequately considered all the required components at both the readiness and the instructional levels?"

The individual items that were most highly correlated with the total plan rating were:

1. The objectives are relevant and applicable to the ECE program intent (item 4.22 in plan rating form).
2. The goals and objectives will facilitate individualization of instruction (item 4.26).
3. Process and product measures will be part of the evaluation (item 6.24).
4. The evaluation procedures facilitate individualization (item 6.24).
5. The effectiveness of the various program components can be measured separately (item 6.25).

CHART 1

Data Sources Used in the Consolidated Evaluation of Programs, 1974-75

Agency involved	Instrument used to gather data	Agency completing instrument	Description of instrument's contents
District with ECE, ESEA Title I, or EDY funding	Form A-127D	District office	District level allocation plans, application for funding
Elementary and secondary schools with ECE, ESEA Title I, or EDY funding	Form A-127ES Form A-127Sec (school level plan)	Schools	School level plans: review of needs assessment process, objectives, activities, evaluation, dissemination, and budget
Elementary schools with ECE funding	School level plan rating instrument	State Department of Education	Rating of school level plans
Selected ECE schools	Program implementation. Quality review instrument (monitor and review)	State Department of Education (monitor and review)	On site review and rating of programs' implementation
Selected ESEA Title I and EDY schools; some ECE schools	Compliance review instrument	State Department of Education (Program review and improvement)	On site reviews of program compliance with statutory requirements
ECE schools	Form E-127I (Progress implementation report)	Schools	Three progress reports of program implementation

CHART 1 – CONTINUED

Data Sources Used in the Consolidated Evaluation of Programs, 1974-75

Agency involved	Instrument used to gather data	Agency completing instrument	Description of instrument's contents
Elementary and secondary schools with ECE, ESEA Title I, or EDY funding	Form E-127P (Product evaluation report)	Schools	Product evaluation report: enumeration of pupils, program personnel, and volunteers; pupil achievement on standardized tests (pre and post); and self-reports on activities implemented, objectives accomplished, and recommendations for future
Stratified random sample of schools with ECE, ESEA Title I, or EDY funding	In-depth studies	Schools	Detailed product evaluation report in one of the following components: reading, mathematics, language development, parent participation, parent education, multicultural, staff development, and health and auxiliary services
Districts with ECE, ESEA Title I, or EDY funding	Form CAER 10	District office	Financial report for each program: ECE, ESEA Title I, and EDY

TABLE 2

Distribution of Plan Rating Scores for All ECE Funded Schools, 1974-75

Item rated	Total possible score	Mean score	Correlation with entire plan
Needs assessment	36	21.15	.7585
Problem identification	36	21.06	.8071
Program goals and objectives	63	34.48	.9041
Program description	118	58.94	.9277
Evaluation and dissemination	144	62.65	.9251
Budget	36	24.86	.3692
Total score	432	217.32	1.0000

N=2,350. With this N, a correlation of .197 is significant at the .05 level of confidence.

The items for optional, multicultural, and bilingual components generally were very poorly related to the plan rating as a whole; but for optional and bilingual areas, this result could be a result of the scoring method used. Since these items were not required, they were often left blank, which would have been scored as zero. A score of zero was also given if the item was supposed to be in the plan but was of such low quality that it could not be scored.

When all school plans had been received and rated, the results were returned to the schools for their use in future program planning.

Based on a review of the school level plan forms used in 1974-75, a revised form was developed and implemented for 1975-76. A new plan rating instrument was developed to coincide with this form. Measures of inter-rater reliability were made during the inservice sessions to train plan raters and after the plans were reviewed.

Local Evaluation Processes

Program operation for 1974-75 began in the schools in the fall. As indicated, within their plans each local school had an evaluation design. Its purpose was to provide the school with information for its own decision making. This particular information was not designed for use at the state level and was not included in this report.

Monitor and Review

The ECE management team performed a program implementation review at a total of 913 ECE schools in the 1974-75 school year. Of the 913 schools, 319 ECE schools entered the program in 1974-75, and the other 594 schools were schools in districts which received no expansion funding for 1974-75, schools which moved from partial to full funding in 1974-75, or schools which had not been visited in 1973-74.

The monitor and review (MAR) quality rating form was developed by Department of Education staff in the summer of 1974. Each item selected for inclusion related to legislatively mandated portions and/or the guidelines of ECE. Each item on the MAR quality document was to be rated on a zero to nine scale, with zero representing "no evidence" and nine "exemplary." Table 3 shows

TABLE 3

Areas Rated and Maximum Possible Scores in Monitor and Review Ratings, 1974-75

Area rated	Maximum possible score
Instruction-reading, language development, and mathematics	81
Prescription-reading, language development, and mathematics	27
Documentation-reading, language development, and mathematics	27
Balanced curriculum	9
Optional components	18
Learning environment	27
Multicultural	9
Health auxiliary	63
Parent participation	63
Parent education	18
Staff development	54
Articulation	27
Maximum MAR score	423

the various aspects of the ECE program which were rated and the possible scores which could be obtained. Appendix C-3 contains a copy of the instrument used and criteria for its use. The reviewers were 30 State Department of Education consultants and 19 outside consultants. All the reviewers were experienced teachers, and many had been supervisors, principals, superintendents, or school psychologists. The majority had been preschool or primary teachers, but some had taught upper grades or adult education.

Training sessions were held in October and November, 1974. The first phase consisted of a three-day inservice meeting in the Department during which the reviewers studied and discussed the rating instrument and the review process. The following week, all Department trainees spent three days in schools conducting reviews on two small samples of schools. Between the first and second series of audits, a day was set aside for review of the process and discussion of problems. After Department personnel had been through the above process, the outside consultants were brought in. Each field team consisted of one Department person as team leader and either an outside consultant or another Department person. At the peak of the process, field teams were in schools three to four days a week.

Some school visits included grades four through six as a cooperative venture with the Department's program review and improvement (PRI) team audits. (See the following section.)

The interview schedule form and the MAR quality form were sent to a school at the time its MAR date was set. Prior to the arrival of the team, the school completed its own self-assessment, using the same forms the state team would be using. The MAR process in the school consisted of meeting with the administrator, making classroom observations, and the interviewing staff and parents. At the end of the day, the team presented its ratings, commendations, and recommendations in an open meeting. Time was allowed for discussion and possible reconsideration of the ratings.

Following the MAR visit, each school was given an opportunity to respond to the MAR process by returning a questionnaire to the Department. These questionnaires are summarized in Appendix C-4. To measure the degree of association between the MAR rating and the school's rating of the raters, a Pearson Product Moment correlation was computed and found to be .34. With a sample size more than 100, any correlation above .195 is statistically significant ($p \leq .05$).

Table 4 displays the correlation between the MAR process and the other ratings collected from ECE schools. A comparison of the MAR ratings and plan ratings revealed a correlation of .13. The correlation between the MAR and the process implementation report scores was calculated to be

TABLE 4

Correlation of State MAR Process with Other Parts of School Evaluations for ECE, 1974-75

	Correlation between MAR rating and other ratings, by source of rating				
Type of ECE school*	Plan rating	Process implementation report	Socio-economic status	School self-rating (N=47)	State assessment
First year: N=319 ECE schools	.2113	.2398	.3445	.6674	-
Second year: N=577 ECE schools	.0819	.1433	.2778	.7119	-
All ECE schools: N=896	.1270	.1706	.3123	.6733	.2071

*First year schools were those with no previous ECE participation. Second year schools were those fully or partially funded in 1973-74. Seventeen schools were not included in this analysis because of missing data in their program files.

.17. A third comparison was made between the socioeconomic status of the school and its MAR score. The correlation was .31.

A question raised in the review of the school's self-evaluations led to a fourth analysis. It appeared from observation and discussion that schools were able to use the MAR criteria to produce self-evaluations that were consistent with the audit team ratings. A moderately high correlation of .67 affirmed this observation.

A comparison was made in response to the question raised after the 1973-74 evaluation: "Do good MAR scores match up with improved pupil performance?" This question is partially answered by the correlation between pupil performance on state assessment reading tests and the MAR scores reported in Table 4. The correlation was .21.

The MAR instrument was analyzed for individual item contributions and for the factors that appeared to be most important in the overall rating of a school (see Appendix C-6). The matrix correlation obtained on the 913 MAR documents indicated that the items on the instructional section (part I) were highly intercorrelated and probably measured overlapping factors. The screening/follow-up items and parent education items appear to be measuring essentially the same factors.

Three items on the instrument had very little relationship to the total score. One of these, "Articulation with preschool programs," had very low correlations with any other item; the health items related only to other health items; and the multicultural items related only slightly to the self-concept one.

A factor matrix analysis of the MAR instrument indicated that three factors accounted for 86.3 percent of the variation in scores:

1. Seventy percent of the variation could be accounted for by those items related to the instructional component.
2. Nine and six-tenths percent of the variation could be accounted for by those items dealing with parent participation.
3. Six and seven-tenths percent of the variation could be accounted for by those items related to health and guidance.

The low statistical relationship shown between the various reviews is not surprising. Each review was designed to be independent and to focus on different processes—planning, implementation, and student achievement. Each review was a picture of a given moment in a total process. The plan rating reflected the school's initial program. The MAR scores reflected the quality of the program at a given time during the implementation of the instructional program. Therefore, in order to establish the relationship between planning implementation and student achievement, it would be necessary to:

1. Not only record and judge the quality of the content of each school plan but also record and make quality judgments about each significant change in both content and process on a regular basis throughout the year.
2. Make a judgment about the degree to which the planned program is being implemented and the quality of the instruction as it affects the learner on a formative basis.

The MAR scores may also be affected by the presence of the observer. Questions of inter-rater reliability were also frequently raised in respect to such on-site quality judgments. Training sessions and field testing of the instrument were carried out in 1974-75, but no statistical estimates of the reliability of the instrument's application were made.

Based on the analysis of the 1974-75 MAR document and process, a team of consultants redesigned the instrumentation. Personnel from school districts and offices of county superintendents of schools reviewed the revised form in the summer of 1975. The new form clarifies the basis for judgments within the instrument and provides a revised rating scale (0-5). Three points of view exist within the instrument: the implementation according to the school plan, the progress made toward restructuring or revitalizing, and the quality of the program. The suggestions provided by the local schools' evaluation of the MAR process were noted and influenced some changes in the inservice training for MAR team members. Inter-rater reliability is being examined in the fall, winter, and spring of 1975-76. Further training will be provided to MAR reviewers if the inter-rater reliability is low.

Program Compliance Reviews

Compliance reviews were conducted by program review and improvement (PRI) teams in 431 schools, 365 of which were ESEA Title I and EDY and 66 of which were EDY only.

The compliance rating forms used by the PRI teams were developed by Department staff in the summer of 1974. Each item selected for inclusion related to legislatively mandated portions of ECE, ESEA Title I, and EDY. The form had a simple yes/no choice for each item.

A stratified random sample was used in selecting the schools for PRI visits. In those sampled, the district office and all schools receiving compensatory funds were visited. The instrument was quite long, so only key questions were asked. If a "no" response was given to a key question, then additional questions in that area were asked. If a school or district was found out of compliance, a plan for steps to be taken to change the situation was filed. No aggregation of the results of the visits was attempted.

A revision has been made of the district and school level compliance documents for 1975-76, with each item in the documents directly referenced to specific legal requirements. Training sessions for the application of the revised documents have been held for all elementary and secondary members who will visit schools and use the instruments.

Progress Implementation Reports

Each ECE school was required to submit a progress implementation report in November, March, and July in which it reported on the number of activities it proposed to implement within each four month period and whether the activities had occurred on schedule (see Appendix C-8). The intent of this report was to encourage schools to institute a time management system that would allow them to organize their flow of events more efficiently throughout the school year.

Problems reported included management concerns, such as assignment of personnel by the local district. For example, one school was unable to meet its scheduled dates for vision and hearing screening because the district reassigned the school's nurse after the school's plan was written. Schools were encouraged to amend their plans whenever such events occurred, and they were not penalized for nonimplementation if an amendment was filed prior to submission of the process report.

There were limitations on the use of the information from the progress implementation reports. There was no monitoring or auditing of the reports. Since there was school level knowledge of their use in the ECE expansion formula, the data may be biased. It was also found that this form of self-report data was difficult to interpret and seemed to be an extra responsibility for the implementing schools. Because the data were difficult to analyze, information from the progress implementation reports is not included in this evaluation.

Due to the above mentioned problems with the progress implementation report data, such reports will not be required in 1975-76.

Product Evaluation Reports

Each school, whether funded through ECE, ESEA Title I, or EDY, was required to submit the product evaluation report by July 15, 1975 (see Appendix C-2). This report contained information in three general areas: enumeration data, student achievement results, and self-report data on the attainment of locally developed objectives. While the end-of-year reports were aggregated across all schools having common funding sources, the information was not audited on a school by school basis.

Enumeration data. Schools were asked to provide the numbers of participants funded by each source within their programs, the numbers of volunteers involved in their programs, and the personnel hired by funding sources. Self-reporting of enumeration data is generally quite accurate but has limited usefulness beyond suggesting the scope of the program.

Self-report data. The self-report data provided in the product evaluation report related to the school's judgment of its accomplishment of its objectives. Since the information for ECE schools contributed 10 percent to the final score for a first year school and 40 percent for a second year school, there existed reasons for schools to interpret their progress in the best possible light. Such information, even with the assumption of good faith, was subject to local interpretation. There was no separate audit of this information.

Student achievement results. The data presented in the areas of student achievement came from objective, norm-referenced achievement tests. These tests are relatively insensitive to specific instructional programs–that is, they measure general objectives quite well but measure specific objectives poorly or only by inference. The instructional activities in any given program frequently stressed specific objectives and, hence, may not be measured adequately with norm-referenced tests. In such cases norm-referenced tests tend to give underestimates of the actual instructional gain made by the students. To compound this problem, a variety of instruments were used. The Department of Education was constrained, however, to use norm-referenced tests, since they make comparisons among groups possible. It would perhaps be better to use instruments specifically designed to measure the acquisition of specific skills. To the extent that programs are unique and are meeting the unique needs of a variety of students, however, the results would be expressed as an unmanageable number of unrelated specific scores. It would be impossible to aggregate them to represent performance of groups of students. Within these limitations, standardized norm-referenced tests are generally the best aggregatable indicators available of student academic progress.

Schools were required to administer standardized achievement tests in reading, language, and mathematics on a pretest and post-test schedule. The achievement tests used, reported by frequency of use, are shown in Appendix A-12. Typically, pretesting was conducted in October, 1974; and post-testing, in May, 1975. The frequency distribution of time elapsed between pretesting and post-testing for schools is shown in Appendix A-13.

Student achievement in reading, language development, and mathematics was reported as mean raw scores and/or grade equivalent scores on standardized achievement tests. In reading, 33 percent of the schools reported mean raw scores; in mathematics, 36 percent did so. In reading, 22 percent of the schools reported grade equivalent scores; 24 percent did so in mathematics. Reporting of both mean raw scores and grade equivalent scores was done by 45 percent of the schools in reading and 40 percent in mathematics. All of these data were analyzed and reported, using the school as a unit of analysis and weighting for size. In total, usable test scores were analyzed for 54 percent of the participants in reading; for 14 percent, in language development; and for 51 percent, in mathematics.

While test scores have conventionally been expressed in grade equivalents, many technical shortcomings exist in the use of this particular type of derived score. Grade equivalent data are not appropriate for making longitudinal interpretations of program effectiveness. The apparent loss in achievement from grades seven through twelve, for example, could be an artifact of the way in which grade equivalent scores are computed. As Coleman and Karweit[1] noted about grade equivalent scores, "When tests are scaled to create equal variance at each grade level, they uniformly show a declining slope as years in school increase. Starting at a given distance *below* the average thus means an ever-larger distance behind the average curve." A technical discussion of the shortcomings of grade equivalent scores can be found in Horst, Tallmadge, and Wood.[2]

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[1] James S. Coleman and Nancy L. Karweit, *Measures of School Performance* (R-488-RC). Santa Monica: The Rand Corporation, July, 1970, p. 10.

In this report grade equivalent scores were converted to gain scores measuring the average months of gain per month of instruction during the time between pretest and post-test.

Given the shortcomings discussed above, this year the Department is presenting, in addition to the grade equivalents, a standard score which has an arbitrarily defined mean of 50 and a standard deviation of 10. The mean raw scores reported were converted to these standard scores. The presentation of standard scores provides an analysis of achievement data that relate the program effects during the year to the program outcomes for that year. In addition to these characteristics, the standard score can be interpreted normatively. For example, if students score 48 on the pretest, the score represents their relative position to a normative group. If those students made a year's progress during the year, their post-test scores would also be 48. Thus, they have maintained their same relative position at post-test time to the normative group. To the extent that the post-test score is greater than the pretest score, the student or group can be considered as having made greater than a year's growth.

Several procedures were reexamined in order to determine whether the gain scores reported could be explained by something other than actual improvement in pupil achievement. Three sources of interference (problems) have been suggested:

1. There might be bias in the statewide averages because the irregular data excluded from computing statewide averages would be systematically lower than the rest of the data.
2. There might be a bias because of the statistical phenomenon of "regression to the mean," which would artificially inflate gain scores for students identified as having the greatest educational needs.
3. There might be a standard score gain bias because of the estimation procedures used to calculate estimated fall and spring norms.

The Department does not have data sufficient to dismiss completely these problems in data analysis, but the Department does have data sufficient to put the problems in perspective.

The Department has not attempted to sample from the total group of students who were exposed to a given instructional component. The test scores presented represent all the usable scores submitted to the state by participating districts. The number of students whose scores are presented is smaller than the total number of students in the program.

Test information reported by districts which was either incomplete or contained procedural irregularities was not used in developing statewide averages. Examples of incomplete data and irregular procedures included instances in which (1) either pretest or post-test information was omitted; (2) test results were combined for several grade levels; (3) test results were not given in either raw scores or grade equivalents; (4) the standardized test used in the pretest differed from the one used in the post-test; (5) out-of-level tests were used; (6) nonstandardized tests were used; and (7) no test results were reported at all. There was a loss in usable grade one data because of the absence of "fall" norms.

A random sample of the data which were classified as irregular and unsuitable for data processing was reexamined, and individual schools were contacted in an attempt to determine whether the exclusion of these data could have introduced a bias in the statewide averages. For some irregularities, comparable figures could not be discerned. In the case of irregular first grade test scores, however, it was found that the average post-test scores of schools that did not report pretest scores were not significantly different statistically from the average post-test scores for schools that did report both pre- and post-test data.

In computing achievement gains, only scores for those students for whom both pretest and post-test data were available were included. Approximately 25 percent of the students who took the pretest did not take the post-test, and 28 percent of those who took the post-test did not take the pretest. The Department has also modified its data collection procedures for 1975-76 to obtain additional information bearing on this problem. Next year, a random sample of schools will be asked to report not only the number but also the average scores of pupils who took the pretest but not the post-test and to report both the number and average scores of pupils who took the post-test but not the pretest.

The effect of the "regression to the mean" phenomenon was examined by estimating and attempting to "remove" statistically the correlation between pretest and post-test scores. The results showed that program participants still gained 2.1 standard scores more than norm group estimated growth for the same period of time. This is a slight reduction of the 2.6 standard score improvement vis-a-vis estimated norm group gains; thus, "regression to the mean" may account for part of the gain shown in the unadjusted scores. In all fairness, however, it should be pointed out that the comparison which is being drawn between program participants gains and norm groups gains is a compensatory question: "Are participants catching up?" Here, for these programs the reported answer is "yes," but traditionally the answer has been "no." Traditionally it has been reported that, nationwide, pupils with the greatest educational need show substantially smaller gains than norm groups.

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[2] D. Horst, G. K. Tallmadge, and C. Wood, *Measuring Achievement Gains in Educational Projects,* (RMC Report UR-243). Los Altos, Calif.: RMC Corporation, October, 1974, pp. 9, 10.

It is possible that a bias exists in the standard score achievement gain data. This bias could occur if test publishers' fall and spring national norms were based not on fall and spring standardization samples but on linear interpolation between annual midyear standardization samples. There is typically a loss of learning over the summer months or at least a decrease in the rate of progress. As a result, test norms based on linear interpolation underestimate norm group progress between fall and spring. The magnitude of this bias is not known.

The problem of estimating fall and spring norms exists partially because of the expense involved in norming tests. One group of test publishers does not publish fall and spring norms at all. The Department used the standard procedures for estimating fall and spring norms from the annual norms that this group actually does present. A second group of publishers does publish estimated fall and spring norms for which the estimates are based on interpolation (usually linear) across actual annual norms. A third group of publishers, including most notably the publishers of the *Comprehensive Test of Basic Skills* (CTBS), the *Stanford Achievement Tests* (SAT), and the *Stanford Early School Achievement Test* (SESAT), provides fall and spring norms which have been derived empirically from actually administering their tests to norm groups in both the fall and spring. Collectively, this group provides empirical fall and spring norms for levels ranging from kindergarten through the twelfth grade. The advantage of this empirical method is that it avoids the possibility that statistical artifacts have arisen from the method of linear estimation.

To put the problem of estimating fall and spring norms in perspective, the Department conducted analyses of achievement scores under the alternative assumption that the fall and spring norms from all the tests followed the pattern of the empirical norms (in standard score units). Under this assumption, coupled with the assumption of no test selection bias, the program participants gained 1.9 standard scores more than norm groups for the same period.

Scores were aggregated across the several standardized achievement tests to obtain statewide averages and program averages. These averages are offered as summary indication of the academic achievement of program participants. It is important to understand, however, that there are limitations inherent in such figures.[3] [4]

The central question in assessing program effects on pupil achievement is: "How well have the pupils in the program done compared to how they would have done had they *not* been in the program?" Unfortunately, that question is unanswerable. No one will ever know how they would have done without the program. Recognizing this fact, evaluators have turned to alternatives which provide some evidence, albeit limited and imperfect, about program effects. These alternatives involve drawing two types of comparisons: those between program participants and norm groups and those between program participants and a matched group of nonparticipants.

Throughout this report most of the pupil achievement data are presented in terms of comparisons between program participants and norm groups. The national norm for achievement test scores, whether expressed in raw score, grade equivalent, or standard units, functions as a comparison group by representing the achievement level or achievement gain of the average student in the nation. Comparison of participant achievement with norm group achievement is useful in that it reflects how participants are progressing relative to all other pupils of the same grade level.

An additional source of comparison was provided by data from the California assessment program (CAP). The reading achievement scores from CAP for 1973-74 compared second graders with their scores on a nearly identical reading achievement test in 1974-75 as third graders. These are the only longitudinal data; other data reported are cross-sectional, representing different students at different grade levels.

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[3] *The Anchor Test Study.* Washington: U.S. Government Printing Office, 1974.

[4] Robert L. Linn, "Anchor Test Study: The Long and the Short of It," *Journal of Educational Measurement,* Vol. 12 (3), 1975.

The limited use made of the self-report data, coupled with a design which will provide more in-depth information, has resulted in a redesign of the product evaluation report for 1975-76. Basic enumeration data will be requested from each participating school. Based on the results for 1974-75 pretest and post-test, information will be requested in raw mean scores; and standard scores will be used for analysis. Information on accomplishment of objectives, since it is required by the ECE legislation, will be requested. Each school will also be sampled on one of several in-depth studies.

In-depth Surveys

An in-depth survey procedure was established as a data collection strategy to supplement the product evaluation report. The purpose of the surveys was to obtain more detailed evaluative information concerning reading, language development, mathematics, multicultural education, staff development, parent participation, parent education, and health and auxiliary services components.

Each school participating in any combination of ECE, ESEA Title I, or EDY funded programs received one in-depth survey with detailed questions about one and only one component. The sampling procedure was designed to yield a random sample of participating schools for each of the components surveyed.

The percent of returns varied by component (see Table 5). The poorest return (45 percent) was for the parent education component. The parent education return was primarily from ECE schools (95 percent), while the multicultural return tended to be from ESEA Title I schools (82 percent). This situation is important to consider when one attempts to generalize the sampling data to the total population of multifunded schools. The previous cautions about self-report data should be observed when reviewing these survey results.

One further limitation here may be in the local recommendations which were collected. These were generated by people closely involved with the program, who had full knowledge of the situation, but who may not have been able to be objective about it. Such data are difficult to aggregate.

In-depth surveys will again be employed in 1975-76. The range of the surveys will be increased to provide additional information about particular aspects of the program and their processes. Additional instruments with less dependence on self-report data are being developed to provide more useful information.

TABLE 5

Return of In-depth Survey Forms from Schools Participating in ECE, ESEA Title I, and EDY, 1974-75

Component* surveyed	Number of surveys		Percent returned	Funding source (duplicated count)		
	Mailed	Returned		ECE	ESEA Title I	EDY
Reading	405[+]	405	100	177	277	152
Language development	405[+]	309	76	153	216	125
Mathematics	405[+]	361	89	173	241	161
Multicultural	203	196	97	52	160	90
Staff development	405	306	76	139	209	133
Parent participation	405	338	83	164	239	152
Parent education	203	92	45	87	52	46
Health and auxiliary services	405	302	75	144	209	129

*There were no in-depth surveys for the educational development, bilingual-crosscultural, and optional components.

+The actual number mailed was probably greater than 405 because of variations which occurred during the mailout process. Consequently, the percent return data was probably inflated.

IV. The Findings

This part of the evaluation report has been arranged according to the findings made regarding (1) the participants in ECE, ESEA Title I, and EDY; (2) expenditures; (3) institutional change; and (4) student achievement; the final section of this part of the report presents information on programs administered directly by California state agencies.

Participant Findings

Program participants included students, parents, school personnel, and other community members who participated in any ECE reform effort or in an ESEA Title I or EDY program. Students within a participating school who were in various special education day classes were not considered program participants.

The Student Participants

A total of 806,752 students in kindergarten through grade twelve participated in the consolidated programs in 1974-75. (See Figure 1 for the number of student participants by grade level.) Approximately 65 percent of the participants were enrolled in kindergarten through grade three, with 23 percent in grades four through six and 12 percent in grades seven through twelve. Appendix A-1 presents the number of students by funding source.

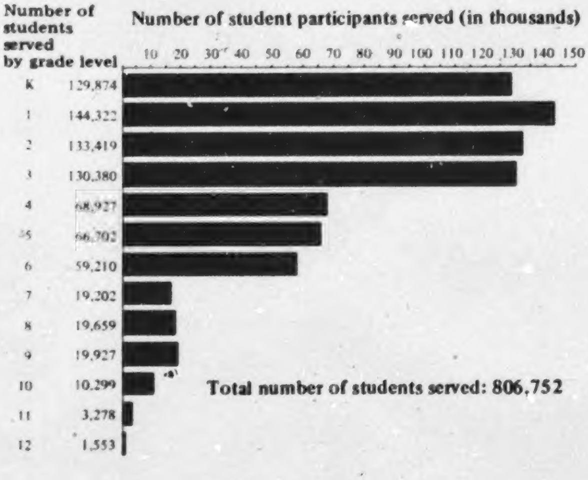

Fig. 1. Number of student participants in ECE, ESEA Title I, and EDY, by grade level, 1974-75

Of the students served in the consolidated programs, more of them received services in the reading component than in any other instructional component. More than 770,000 pupils were served in reading; 580,000, in language development; and 717,000, in mathematics. The numbers of participants involved in at least 75 percent of the activities in each component are presented in Appendix A-2. Participants who were involved in more than one component were counted for each component in which they participated (duplicated count).

ECE. School districts reported that 303,131 students participated in the ECE effort in 1974-75: 80,557 in kindergarten; 79,433 in first grade; 72,498 in second grade; and 70,643 in third grade.

ESEA Title I. School districts reported that 591,561 students from preschool through the high school grades participated in ESEA Title I activities. Of the total number served, 97.6 percent of the students were enrolled in the public schools. Enrollment data are presented in appendixes A-1 and A-2. The greatest concentration of students occurred in the primary grades, where 60 percent of the participants were served; nearly 30 percent of the program participants were in grades four through six, while the remaining 10 percent were in grades seven through twelve. Table 6 displays, by grade level, the percent of students in California who received ESEA Title I benefits from 1967-68 through 1974-75.

EDY. During the 1974-75 school year, 436,009 students, kindergarten through grade twelve, participated in programs augmented by educationally disadvantaged youth (EDY) funds or EDY in combination with other funding sources. Of the total number of students served, 38,634 or 8.9 percent received benefits from EDY resources only. The number of EDY student participants, by grade level, is shown in appendixes A-1 and A-2.

TABLE 6

Percent of Students Receiving ESEA Title I Services in California by Grade Level Groups, 1967-68 Through 1974-75

Grade level	Percent of total ESEA Title I enrollment, by school year							
	1967-68	1968-69	1969-70	1970-71	1971-72	1972-73	1973-74	1974-75
Kindergarten through grade three	40.4	41.8	50.4	52.1	51.9	54.0	56.5	58.9
Grades four through six	22.8	23.7	33.0	33.9	34.7	35.3	30.3	29.8
Grades seven through nine	19.9	20.7	8.9	9.1	8.2	6.6	8.4	5.7
Grades ten through through twelve	12.4	10.9	4.0	3.6	3.3	2.7	3.7	2.4

NOTE: Figures for participants in preschool and ungraded programs are not included in this table; therefore, the values in the respective columns do not total 100 percent.

Volunteer Participants

Nearly 200,000 hours per week of program assistance were donated by 67,000 adult volunteers; an additional 61,000 students at all grade levels volunteered more than 156,000 hours per week. For ECE, 42,727 adults and 36,871 students volunteered during an average week. For ESEA Title I programs, schools reported that during any typical week in the school year, more than 39,000 students and 37,000 parents volunteered their services.

Employed Personnel

In addition to volunteer help, programs employed aides, teachers, specialists, and resource personnel. Appendix A-2 displays information related to program participants and persons employed by consolidated programs.

ESEA Title I. To implement ESEA Title I projects in 1974-75, school districts hired 14,634 persons beyond those normally provided with school district funds. The percent of positions funded, by category, is presented in Figure 2. Of the positions funded by ESEA Title I, aides made up the largest personnel category. A complete listing of personnel employed by ESEA Title I projects in 1974-75 is presented in Appendix A-2.

EDY. To implement their programs, school districts used EDY funds to increase their staff by 7,615 persons. The percent of positions funded by category is shown in Figure 3. Findings indicated that aides made up the largest personnel category. A complete listing of personnel employed by EDY projects in 1974-75 is presented in Appendix A-2.

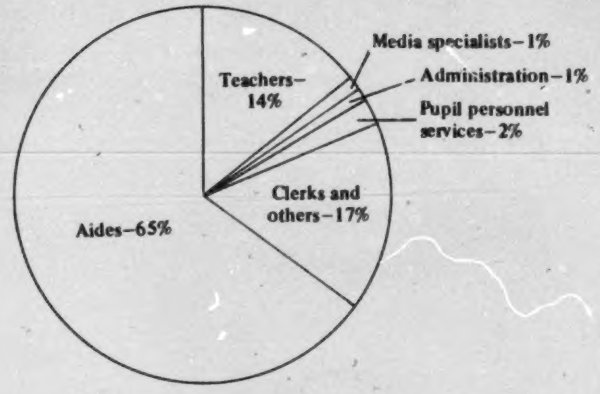

Fig. 2. Percent of personnel in ESEA Title I projects, 1974-75

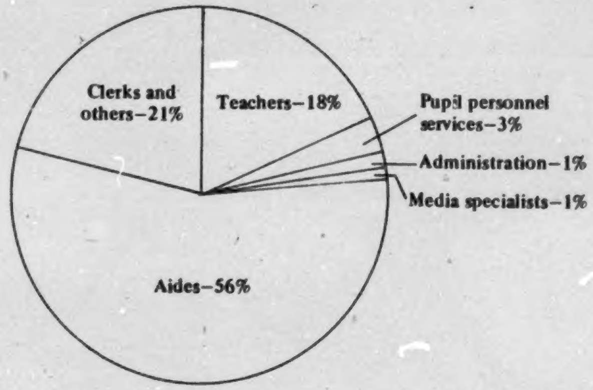

Fig. 3. Percent of personnel in EDY projects, 1974-75

Expenditure Findings

The early childhood education (ECE) reform effort in 1974-75 distributed $40.9 million. The 1974-75 appropriation was $40 million, and $900,000 was carry-over monies from 1973-74.

In 1974-75, as shown in Table 7, more than $155 million was allocated to California by the federal government as grants and contracts to local and state agencies.

During 1974-75, educationally disadvantaged youth (EDY) funds totaling $84,600,000 were appropriated for expenditures. That amount, less approximately 1 percent for state administration, was distributed to 414 school districts throughout California. Approximately $4.6 million allocated to school districts was used for the implementation of EDY only programs, and the remaining EDY funds were channelled to schools receiving other state or federal funds as well. The amount and percent of EDY funds and the variety of EDY program combinations is presented in Appendix D-3.

The allocations, expenditures, and carry-over funds for each of the three major funding sources under the consolidated application process were reported in a special expenditure report by August 15, 1975. Although audit of the reports filed for each funding source was not complete at the time this report was written, it was possible to select for evaluation a random sample of reports from ESEA Title I, ECE, and EDY schools. Each district reported a summary of the total amounts expended for all schools within the district receiving the specific funds. (See figures 4, 5, and 6 for the percent of monies expended in the districts sampled, but since these figures were based on a

TABLE 7

Educational Agencies Receiving ESEA Title I Project Grants in California, 1974-75

Agency	Amount of grant	Percent of total
Local educational agencies	$132,577,018	85.2
State educational agencies		
Migrant education	17,007,082	10.9
Handicapped children	1,519,514	1.0
Neglected and delinquent	1,448,082	.9
California Department of Health	1,373,988	.9
California Youth Authority	183,421	.1
State Administration	1,530,940	1.0
Total	$155,640,045	100.0

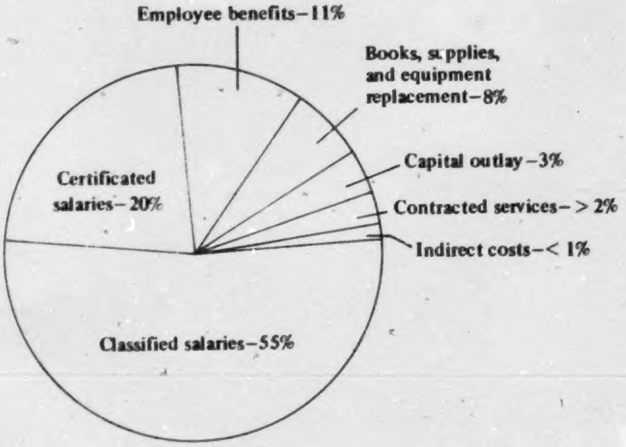

Fig. 4. Budget categories of ECE funds, by percent of expenditure, from a random sample of unaudited reports of 22 district summaries, 1974-75

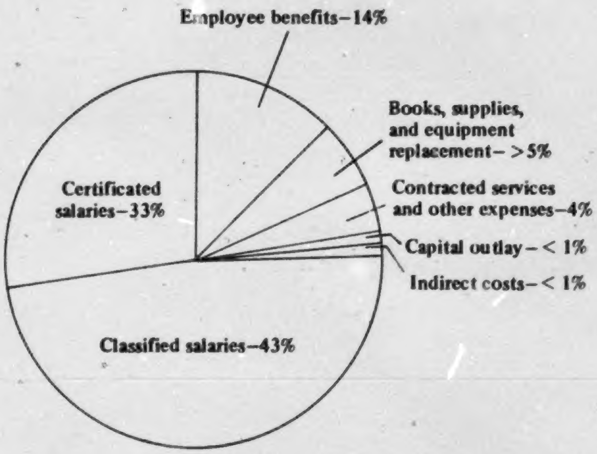

Fig. 5. Budget categories of ESEA Title I funds, by percent of expenditure, from a random sample of unaudited reports of 18 district summaries, 1974-75

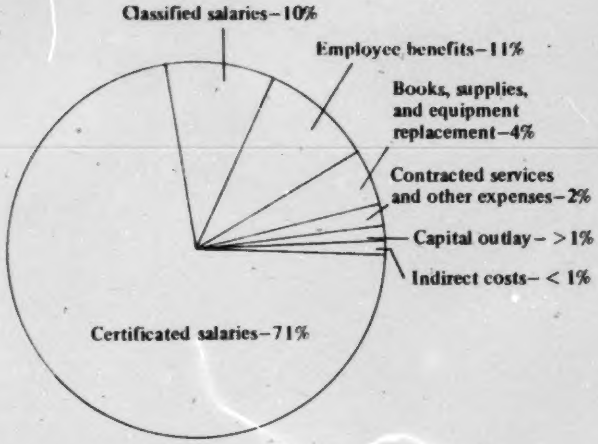

Fig. 6. Budget categories of EDY funds, by percent of expenditure, from a random sample of unaudited reports of one cooperative summary and 14 district summaries, 1974-75

sample of the reports returned, use caution in their interpretation.)[1]

It should also be kept in mind that several funding sources are frequently combined within a school, so that the pattern may simply reflect the decisions of which "source" to use to provide specific parts of a total local school program. Furthermore, the funds in all cases must be supplementary, not supplanting.

The ECE data, Figure 4, indicate that in the 1974-75 school year, approximately 55 percent of the per student allocation ($130 per student, with an extra $65 for up to one fourth of the disadvantaged students in kindergarten through grade three) was spent on salaries for support staff to lower the adult:student ratio in the classroom. Certificated salaries, employee benefits, and books and materials were a smaller part of the program expenditures.

In comparison, ESEA Title I expenditures (Figure 5) showed a substantial percentage of cost going to teacher and supervisory salaries, with a slightly greater proportion of employee benefits. The employee benefits, health insurance for example, needed to be paid only to employees who worked more than half time. In many schools, classified personnel are hired for slightly less than half time, thus eliminating the expense of employee benefits. An analysis of the participant figures returned by schools (Appendix A-2) suggests that the 18 percent of certificated staff hired accounted for 33 percent of the expenditures in direct salaries and also a large percentage of the employee benefits.

The expenditure figures for EDY monies (Figure 6) indicate that at least 71 percent of the funds were spent on teacher and other certificated salaries. The classified salaries took 10 percent of the budgets, and another 11 percent went into employee benefits. Appendix A-2 shows that 75 percent of the expenditures went to 44 percent of the extra personnel. The aides, who made up 56 percent of the personnel hired, received only 10 percent of the monies. This discrepancy is probably due to the lack of employee benefits paid and the low salaries of classified staff. A school can hire several part-time classified staff persons for the cost of one full-time credentialed person.

Since these figures were based on a sample of the reports returned, caution should be exercised in their interpretation. All 3,000 of the school reports are being audited as final budget expenditures are established, and the percentages are being recomputed.

Institutional Change Findings

The ECE reform effort provided an "umbrella" for institutional change within the kindergarten through grade three schools. ESEA Title I and EDY services for kindergarten through grade three students were integrated into the ECE plan under the comprehensive "umbrella." As a result, the overall findings in this section relate directly to those schools in which ECE was present; however, other funding was present in many cases.

Since in-depth information was gathered from ESEA Title I and EDY schools on staff development, parent participation, parent education, and the provision of health and auxiliary services to students, the findings regarding these areas will include information on programs of all funding sources. Unless otherwise stated, data in this section were collected from the product evaluation reports.

The findings in this section will address those small areas for which it was possible to make some measurement or observation. This section will also attempt to provide the reader with fuller definitions of the diversity which developed at the local school sites within each of the areas defined broadly by the guidelines.

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[1] Unaudited reports of 22 district summaries of ECE expenditures, of 18 district summaries of ESEA Title I, and of 14 district summaries and one cooperative summary of EDY expenditures in 1974-75 were compiled. Of these, there were two districts with all three funding sources, six with ECE/ESEA Title I, and two with ECE/EDY.

District Level Planning

In districts with ECE, district level planning occurred, and district advisory committees were operational in 1973-74, as evidenced by the filing of plans by all districts which participated in ECE. No further auditing of the data contained within these plans was made. No additional district level plans were requested or filed in 1974-75.

School Level Planning

All schools performed school level planning. The ECE plans were submitted to the Department of Education during the summer of 1974 and were rated. Appendix C-10 contains the distribution of quality ratings on all items.

Needs assessment process. The school level plans contained a report of the needs assessment process, which had been conducted as the first step in plan development, and its results. All findings relate to ECE schools.

The ways in which needs were identified varied. In one school a full day conference was held. All members of the staff, many of the parents, and some students worked in small groups to discuss what they saw the school doing well, what it was doing poorly, and what it should be doing. In another school, members of the faculty and the principal met in homes with different groups of 20 parents each, holding informal discussions about the school. In a third school, a questionnaire was sent to all faculty, staff, parents, and students, asking them to describe the good and bad things that the school was doing.

Table 8 presents the data from the plan ratings which apply to the quality of the needs assessment process. Each of the four criteria–parent and community involvement, staff involvement, survey of the kindergarten through grade three population, and assessment of the required areas–were judged as having either no evidence, implied by context but not specified by operation, specified as a consideration and partially operationalized, or optimized by function, a potent operational factor in the program. The table shows the percentage of schools which were judged on each of these items in each of the categories, and this provides a general picture of the quality of the total process.

As can be seen in Table 8, on all four criteria more than 54 percent of the schools specified as a consideration, and partially operationalized, the needs assessment process, while 19 percent more had optimized the process and used it as a potent operational factor in the program. From this evidence, it can be concluded that needs assessment of a rather high quality was conducted in more than 75 percent of the schools.

The quality of the analysis of the identified needs was also judged in the plan rating. The statement examined included (1) the identified needs represent problems rather than symptoms of problems; (2) the problems which the identified needs represent are under the direct operational control of the school or district; and (3) the identified needs relate to the program components. Table 9 shows that the quality of the needs analysis was, in approximately 60 percent of the cases, partially operationalized, while an additional 17-25 percent of the schools were even higher in this area. The evidence, therefore, indicates that the quality of the analyzed needs was generally good; and that, particularly in the area of relating the rest of the program to the needs, the schools did quite well.

Program goals and objectives. The development of goals as part of the needs assessment process frequently occurred at the same time that needs were identified. At local schools groups would develop defined and measurable performance objectives in different ways. For example, one school had a series of evening meetings with a group of ten representative parents writing statements on goals or objectives. Another school's staff members wrote its objectives; then a large group meeting was held for parents during which the objectives were either approved or modified. In a third situation, a small group of parents and staff members went on a weekend retreat, wrote the entire plan, and brought it back to the other parents and staff members for their modification and approval.

From the plan ratings, less than 20 percent of the ECE schools had difficulty in making clear statements of their goals or desired conditions, while more than 23 percent were judged as excellent. Further judgments about the quality of the goals and objectives were made on the basis of the following:

1. The goals and objectives are directly related to the identified needs as prioritized.
2. The objectives are relevant and applicable to the ECE program intent.
3. The program objectives are stated in language which is accurate and unambiguous.

TABLE 8

Plan Ratings of the Quality of the Needs Assessment Process in ECE Schools, 1974-75 (N=2350*)

Item rated	Percent of schools receiving each quality rating			
	No evidence	Implied by context, but not specified by operation	Specified as a consideration and partially operationalized	Optimized by function; a potent operational factor in the program
The parents and community were actively involved in the process.	1	24	56	19
The staff was actively involved in the process.	1	9	62	28
A comprehensive survey of the K-3 child population was conducted.	1	22	54	23
The process adequately assessed the required program areas.	1	23	54	22

*Each plan was rated by at least two separate raters. This N represents the individual ratings.

TABLE 9

Plan Ratings of the Quality of the Analysis of Needs Identified and Relationship to Plan in ECE Schools, 1974-75 (N=2350*)

Item rated	Percent of schools receiving each quality rating			
	No evidence	Implied by context, but not specified by operation	Specified as a consideration and partially operationalized	Optimized by function; a potent operational factor in the program
The identified needs represent problems rather than symptoms of problems.	1	24	58	17
The problems which the identified needs represent are under the direct operational control of the school or district.	1	19	61	19
The identified needs relate to the program components.	1	13	61	25

*Each plan was rated by at least two separate raters. This N represents the individual ratings.

4. The program objectives require performance which is observable and measurable.
5. The objectives address outcomes rather than processes.
6. The goals and objectives will facilitate individualization of instruction.

The quality judgments made about the goals and objectives from the plan rating of ECE schools are shown in Table 10. As can be seen, schools were better able to develop goals than objectives, as evidenced by less than 20 percent rating low and more than 20 percent rating high in goal areas, while almost 30 percent rated low and only about 5 percent were rated high in the areas dealing with objectives. In all areas more than 50 percent were rated in the middle ranges.

The program description section of the plan, which contained information about the areas in which activities would be conducted, was judged in ECE plans on the quality of the planning in the evaluation and dissemination section, which outlined the manner in which the program would be judged locally, and the school level budget, which provided an estimate of the budget for ECE funds and all compensatory and other supplementary funds. These sections were also developed in similar diverse ways. Specific information about the distribution of quality scores in these areas is included in Appendix C-10.

It is clear, from the information provided from the plan rating and its analysis, that ECE schools throughout California were engaged in a systematic planning process which included a thorough quality needs assessment and resulted in clear goals and objectives on which plans for the operational programs were based.

Comprehensive Restructuring

Evidence of the implementation of school plans and of the effect they had on comprehensive restructuring may be inferred from on-site monitor and review (MAR) data and the school-prepared self-report data from the product evaluation report and in-depth studies. Appendix C-5 contains the distribution, range, median, and average MAR scores for the various areas judged.

Individualized, diagnostic instruction. Diversity existed not only in the ways in which the school plans were developed but also in the implementation of the programs. All programs were to stress an individualized diagnostic, prescriptive approach to instruction. Within this broad outline, the ways in which students were instructed varied from school to school. For example, a mathematics and reading test center was established in one school. Each student was tested there, and the results were given to the classroom teacher. The teacher then established an appropriate two week lesson plan for each student, after which the students went back to the test center for retesting and the cycle was continued. In another school, the teacher read every other day with each student, made notes about the areas in which the student needed help, and then gave a special assignment for the next day. In a third school, a classroom aide, under the direction of the teacher, assessed each student. The teacher reviewed the assessments, decided what each student should do next, and had a volunteer do that work with the student.

All of these are individualized diagnostic, prescriptive approaches. The common elements are individually observing the student, knowing what he or she can and cannot do, and providing sequential steps for his or her learning experiences in the classroom.

While visiting the school, the monitor and review (MAR) team observed each kindergarten through grade three classroom in order to determine the type of individualized instruction provided. For individualized instruction, ECE schools were rated by the MAR teams in reading, language development, and mathematics on the quality of their organization in providing for continuous student progress; their continuous use of data from diagnostic tests and systematic observation of individual student progress; their use of a continuum of instruction objectives as the basis for indicating student progress; the availability of various prescriptive tasks, materials, and methods which are specific to the diagnosed needs of each student; and their charting or documentation of student progress. Table 11 contains the quality ratings given in each of these areas. In general, approximately 50 percent of the schools were rated "high" in their ability to perform these functions in reading and mathematics, with less than 10 percent below satisfactory. Although more than 75 percent of the schools were rated satisfactory or better in the area of language development, on several items at least 20 percent were rated below satisfactory.

The observers also were looking for evidences of a balanced educational curriculum, an effort toward restructuring and revitalizing of the learning environment, and an improved self-concept on the part of the students. "Restructuring" did not imply a requirement to alter the learning environment or the physical plant; it was intended, rather,

TABLE 10

Plan Ratings of the Quality of Goals and Objectives in ECE Schools, 1974-75 (N=2350*)

Item rated	Percent of schools receiving each quality rating			
	No evidence	Implied by context, but not specified by operation	Specified as a consideration and partially operationalized	Optimized by function; a potent operational factor in the program
There is a clear statement of the desired conditions (through goal statements).	1	16	60	23
The goals and objectives are directly related to the identified needs as prioritized.	1	15	64	20
The objectives are relevant and applicable to the ECE program intent.	0	22	61	17
The program objectives are stated in language which is concrete and and unambiguous.	0	33	52	15
The program objectives require performance which is observable and measurable.	1	33	51	15
The objectives address outcomes rather than processes.	1	29	57	13
The goals and objectives will facilitate individualization of instruction.	0	28	55	17

*Each plan was rated by at least two separate raters. This N represents the individual ratings.

TABLE 11

MAR Ratings of the Quality of Individualized Instruction in ECE Schools, 1974-75 (N=913)

Item rated	Percent of schools receiving each rating					
	No evidence	Needs improvement	Shows promise	Satisfactory	High quality	Exemplary
Organization. The classroom instructional program is organized to provide for continuous student progress in:						
Reading	0	1	6	34	54	5
Language development	0	1	15	47	34	3
Mathematics	0	1	7	38	50	4
Diagnosis. Continuous use of data from diagnostic tests and systematic observation of individual student progress is made in:						
Reading	0	1	6	34	55	4
Language development	0	3	19	46	30	2
Mathematics	0	1	8	38	50	3
Continuous Progress. A continuum of instructional objectives serves as the basis for indicating student progress from criterion-referenced measures in:						
Reading	0	1	8	34	52	5
Language development	1	4	23	44	26	2
Mathematics	0	2	11	37	46	4
Prescription. Various prescriptive tasks, materials, and methods are available which are specific to the diagnosed needs of each student in:						
Reading	0	1	7	35	51	6
Language development	0	3	14	47	33	3
Mathematics	0	1	9	40	45	5
Documentation. Pupil progress is charted or documented in:						
Reading	0	1	6	34	53	6
Language development	2	4	20	44	28	2
Mathematics	0	1	7	38	50	4
Balance. Program provides a balanced curriculum.	1	0	3	36	53	7

to reflect the action taken by the individual school to improve its educational program. As examples, this "restructuring" might have been extensive changes in the staff organization in order to provide for team teaching which would better utilize the skills of the teachers, or it might have involved the establishment of learning centers in each classroom in order to individualize instruction. On these items measuring the presence of an appropriate learning environment, 97 percent of the schools were rated at or above the satisfactory level. Appendix C-5 contains the ratings in these areas.

The in-depth studies on the reading, language development, and mathematics components of the ECE programs provide a picture of the diversity of curriculum in each of these areas.

The 177 ECE schools sampled in-depth for reading reported a pattern of curriculum content that appears to reflect the traditional hierarchy of skills in most reading programs. Readiness activities–such as visual-motor perception, memory, sequential skills, letter sounds, and letter names–were most often used in the kindergarten and first grade classes. Vocabulary and decoding skills were emphasized in first and second grades, and comprehension, study/locational, and reading for specific purposes were emphasized in the second and third grades. The development of interest in reading was a part of the reading program for all grades but was least emphasized in kindergarten.

A total of 153 ECE schools were included in the language development in-depth sample. The pattern of skill development reported is not at all clear. Vocabulary development, listening, understanding, recalling, and speaking skills were most emphasized across all grades. Writing/readiness skills were emphasized most in first grade and received equal emphasis in kindergarten and the second and third grades. Development of spoken sounds–vowels, consonants, and blends–occurred most often in first and second grades and least often in kindergarten. Development of voice and rhythm was concentrated at first and third grades and occurred least often in kindergarten. Writing skills, grammar, composition, structural analysis, and reference skills were generally concentrated in the second and third grades. The list of evaluation instruments reported by schools as being used to evaluate language development progress evidences a heavy reliance on locally developed inventories, tests, and scales (see Appendix B-7).

The in-depth sample of the mathematics component included 173 ECE schools. The pattern of emphasis clearly follows the traditional pattern of mathematics curricula. Kindergarten and first grades emphasized the readiness aspects of mathematics, the need for language development, counting, ordering, sorting, matching, and manipulatives. First and second grade emphasized numbers, arithmetic operations, and geometry (identification of plane and solid figures). Measurement, problem solving, statistics, patterns and graphs, and reasoning were most often found in third grade but were also a substantial part of first and second grade programs. The sample school data indicate an interest in developing arithmetic number and operations skills in kindergarten, including patterns and nature of numbers as well as addition and subtraction operations. How much of the kindergarten program is devoted to the nature of numbers as opposed to computation could not be determined.

The in-depth studies on the reading, language development, and mathematics components of the ECE programs also resulted in local school recommendations of the areas in which, based on their own evaluations, they believe they needed to make improvements.

The most frequent response of the 177 ECE schools sampled in reading was that they needed either to revise program content or to change program direction in order to improve their reading component. The schools also indicated a need to improve their evaluation methods, encourage more individualized instruction, and use or purchase additional materials. Needs for staff training and more non-English materials were also mentioned, but less frequently.

In language development, the 153 ECE schools sampled recommended most often an increased emphasis on development of speaking, aural comprehension, writing, and listening skills. Second, they recommended improvement of their evaluation techniques, including diagnostic instruments. Other general concerns were improving teacher awareness and increasing the individualization of the program to bring it closer to the student's social and academic needs.

For mathematics the 173 sampled ECE schools recommended most often that they improve classroom and school facilities and the use of educational and manipulative materials and also that they improve their own evaluation procedures, diagnostic instruments, and general teaching skills.

In the same in-depth studies, the schools were also asked to identify those outcomes in each of the areas which they felt were important but nontestable. The important, nontestable outcomes of the reading program were believed to be increased interest, improved self-esteem, and increased motivation on the part of children toward reading and classroom activities. A second important nontestable outcome was increased parent participation and community involvement which lead to greater awareness and understanding of the reading program.

For the language development component, the important nontestable outcomes that were reported were focused on the skills developed by the students–listening, aural comprehension, speaking, and writing (the same areas that the same schools most often believed needed increased emphasis in their new plan). The sampled schools also believed that development and improvement of language program content, an increase in student self-awareness, and development of positive student attitudes towards learning were outcomes of the program. Increased teacher awareness of the importance of language development was also cited.

The outcomes most often mentioned as important, nontestable ones in mathematics were increased student self-esteem and positive attitudes and the improvement in student mathematical abilities. Increased teacher awareness, development of positive attitudes on the part of teachers, individualization of instruction, and increased parent involvement and student interest were included in the list of nontestable items.

Staff development. Restructuring of staff development activities occurred not only within schools funded through ECE but also in those funded through ESEA Title I and EDY. Details of this information are contained in appendixes A-15 and A-20. The in-depth study information, which covered kindergarten through grade three schools funded by all three sources, provided information about the range of the activities, their nature, and the results of local evaluation of their effectiveness.

The objectives and activities reported in the in-depth study emphasized improvement of instruction in one or more of the following curriculum areas: reading, writing, oral language, mathematics, multicultural education, and bilingual cross-cultural education. Parent education, parent participation/community involvement, and health/auxiliary services were also included as topics. The major objectives for staff development, as reported by the sample of 306 schools, were methods to individualize instruction, use of diagnostic/prescriptive techniques, improvement of reading and mathematics instruction, improvement of teaching skills related to student behavior and motivation, and use of aides in the classroom. From the product evaluation report, 82 percent of these objectives were reported as achieved or exceeded. The activities most frequently reported were workshops (45 percent), visitations to other schools (28 percent), general meetings (17 percent), and college courses (5 percent). Nine out of ten of the planned activities were reported fully implemented by the schools.

Participants in staff development activities included administrators, teachers, aides, and volunteers–the number and type varying from school to school. The in-depth study showed that attendance at all staff development activities was mandatory in 50 percent of the schools; in 25 percent, attendance at some was mandatory; and in 20 percent, all activities were voluntary. Five percent of the schools did not specify whether their activities were mandatory or voluntary. The amount of time allocated for staff development activities varied widely from school to school, with the average per participant ranging from less than ten hours to more than 200 hours. Fifty-two percent of the schools reported less than 60 hours of training per participant. Staff development activities were scheduled by 43 percent of the schools during the regular school day, by 37 percent, after school, and by 20 percent, in the evening or on weekends.

Effectiveness of staff development activities, as reported in the product evaluation report, was evaluated primarily on the basis of subjective judgments, which relied heavily on staff evaluations and teacher opinions. Less frequently used evaluation techniques were objective measures such as questionnaires and rating scales.

The following staff development activities were rated "effective" or "very effective" by 90 percent or more of the schools implementing the activity: workshops at the school level before school begins in September, school or classroom visitations within the district, individual conferences, school or classroom visitations in other districts, demonstration school observation, workshops at the school level on released time during regular school hours, grade level meetings, college courses conducted in the school or district, and workshops at the school level after school closes in the afternoon.

The following staff development activities were rated "ineffective" or "partially effective" by 12 percent or more of the schools implementing the activity: general faculty meetings; district, interdistrict, or county level workshops; conferences; and college courses on college campuses.

Further information about staff development in schools with ECE funding is provided by the MAR data. As Table 12 indicates, the quality of the staff development and inservice training was based on the programs' meeting the assessed needs of the teachers, paid aides, volunteers, and administrators, and the involvement of the staff in designing the staff development program. As can be seen, the greatest percent of schools were rated satisfactory, high, and exemplary in this area. It should be noted, however, that the ability of the program to meet the assessed needs of the volunteers was quite a bit lower than in the other areas.

In summary, it is clear that diverse staff development activities systematically related to the needs of program participants were occurring at a satisfactory level in more than 85 percent of the ECE schools, and that staff development and inservice training were occurring in all funded schools.

Parent participation. For ECE, ESEA Title I, and EDY, the product evaluation report information indicated that during 1974-75, a total of 389,638 parents in 2,563 schools participated in activities in the schools. Approximately two-thirds of the reporting schools used a coordinator to implement this component and indicated that a third of the contacts relied on phone calls, personal invitation, and notes.

Opportunities for parents to assess program needs as they perceived them were afforded through a variety of methods. Participation in formal surveys, school advisory committees, site visits, and parent-staff conferences were most frequently reported. In more than 60 percent of the ECE school plans, there was a strong indication that parent participation would be active and continuous in all aspects of the program, and there was adequate evidence that parents would be actively involved in the classroom.

For all grade spans in ECE, ESEA Title I, and EDY, the product evaluation report showed that the most frequently reported objectives for parent participation related to expected changes in behavior and performance, advisory committees, parent-teacher conferences, and school meetings (see Appendix A-16). At the kindergarten through grade three level, additional emphasis was placed on use of parents in the school and classroom and involvement in program planning and program evaluation. Less frequently reported at this level were objectives relating to home-school communication and program awareness. In grades seven through twelve, less emphasis was placed on parent participation in program planning and evaluation. Workshops and program orientation were stressed. It was reported that most programs had either attained or exceeded their objectives. These most frequently resulted in more knowledge related to school goals, objectives, needs, and program; participation in school activities; and improved attendance at advisory committee meetings. Program improvements attributed to the impact of parent involvement and referred to most often by reporting projects were increased individualized instruction, a closer school-community relationship, more parent participation, and better parent understanding of the program. Infrequently mentioned were increased staff sensitivity, curriculum changes, and better student attendance. Reports indicated that the activities which were most important to achieving component objectives were parent-teacher conferences, use of parents as aides, dissemination of program information, involvement in program planning and evaluation, and advisory committee recruitment.

Parent participation activities were evaluated as follows: 46 percent by enumeration of participants and activities, 30 percent by subjective judgments, and 24 percent by objective measurements. Enumeration data concentrated on number of parents participating, attendance and number of home visits made, and number of home-school contacts. Subjective judgments reflected parent advisory committee responses, parent comments, staff evaluations, teacher opinions and records, and reports. The objective measurements consisted of parent questionnaires, rating scales, and attitude scales. Many programs also relied on minutes of meetings in evaluation of component effectiveness.

Additional information about parent participation is available for ECE funded schools from the product evaluation report. In the 1,166 ECE schools reporting to the Department of Education, 180,932 parents participated in the school program, an increase of 54 percent over 1973-74 participation. Schools reported they had emphasized personal contacts and special activities (such as meals or outings) as ways of getting a wide representation from all ethnic and racial groups in the schools. Newsletters, often bilingual, were also used to contact parents. ECE schools were generally using full- or part-time paid coordinators to implement parent involvement activities. Volunteer parents and teachers were also used, but less

TABLE 12

MAR Ratings of the Quality of Staff Development and Inservice Training in ECE Schools, 1974-75 (N=913)

Item rated	Percent of schools receiving each rating					
	No evidence	Needs improvement	Shows promise	Satis-factory	High	Exemplary
Inservice program meets assessed needs of:						
Teachers	0	1	6	30	57	6
Paid aides	1	1	10	36	47	5
Volunteers	2	4	21	42	28	3
Administrator(s)	2	1	4	29	57	7
Staff has been involved in designing the staff development program.	0	1	5	35	51	8

frequently. The most frequently mentioned objectives for parent participation in ECE schools stressed greater involvement of parents as members of school advisory committees or as volunteer aides.

As ECE parents participated in the school program, they were involved in needs assessment meetings, surveys, and parent-staff conferences in order to provide input to the schools on the program needs which they, the parents, perceived. The parents' involvement in the evaluation process usually involved the advisory committee or a questionnaire sent to all parents. In schools where the program objective was designed to involve parents in program evaluation, 14 percent of the 916 objectives were not met (see Appendix A-16). The difficulty of involving parents in program evaluation was identified from the MAR data.

According to the majority of the ECE in-depth sample reports, at least half the parents participated in parent involvement activities up to half of the time; in the remaining schools sampled, more than 51 percent or less than 10 percent participation was reported.

As a result of increased parent involvement, ECE schools reported increases in individualization of instruction, closer school-community relationships, and parental and student attitude improvement. Improved student academic achievement and greater staff member sensitivity to the needs of parents were also reported, but less frequently.

In the MAR process, parent participation and community involvement were major concerns of the observers. Each school planned for the use of its parent resources in ways that best met the unique circumstances of the school and the community. In some schools where there were many working parents, participation took the form of assistance outside of school hours. Other schools were able to obtain so many volunteers that they did not need as many paid aides as they had originally planned to hire.

The MAR process judged the quality of parent participation in ECE schools on the basis of (1) the regular meeting and effective representation of the parents and the community by the school advisory committee; (2) the regular involvement of parents in program planning, assistance in classrooms, other supportive assistance, and program evaluation; (3) the existence of an active program to arouse parent interest and enlist support; and (4) the ability of the program to encourage home-school communication in easily understood language. Table 13 shows the range of ratings in these areas. In more than 85 percent of the schools, the quality of parent participation was either satisfactory, high, or exemplary. However, for parent involvement in program evaluation activities, almost 23 percent of the schools were rated less than satisfactory.

From these data, it is clear that vast numbers of parents were involved in the programs in their local schools and that the involvement was of many different kinds. Given a 30 percent increase in participating ECE schools from 1973-74, parent participation increased by 54 percent, a major growth, while in all schools, kindergarten through grade twelve, 389,638 parents in 2,563 schools participated in school activities.

Parent education. Since parent needs varied considerably among ECE schools, there was no one approach to parent education. In some areas, the parent education program concentrated on basic skills, which were identified by the parents as their first concern, while in other schools parents requested theoretical courses in child development.

From the product evaluation report data, expansion of the parent education program in ECE schools in 1974-75 over 1973-74 showed a 55 percent increase in participants, as contrasted to a 30 percent increase in participating schools. In the 1,141 ECE schools with parent education programs, 118,347 parents participated. A majority of the schools responding to the in-depth sample indicated that parent education programs were provided in conjunction with other educational institutions, usually adult education through the high school or community college. About half of these courses were offered for credit.

More than 80 percent of the participating schools' parent education objectives were met or exceeded, as reported in the product evaluation report. The 87 ECE schools in the in-depth sample responded that the content of parent education offerings was usually determined by parents, teachers, administrators, or the advisory committee.

Schools reported that their objectives for parent education most often focused on attendance at meetings and programs designed to enable parents to understand more about the school program. Less often reported objectives were those related to education concerning pupil attitudes and behavior (see Appendix A-17).

In contrast to the objectives stated above, the most "effective" program topics, in terms of frequency of response on the sample form, were those related to child development. Informational topics, either on ECE or the school's operation, were next; and parent-student relationship topics were third. Programs on specific instructional areas or techniques, multicultural programs, and workshops were less often listed as "effective."

Further information on the quality of the parent education activities was gathered during the monitor and review (MAR) process. The rating was based on parent participation in the design of the program, and parent participation in the program. As Table 14 indicates, more than 75 percent of the programs were judged satisfactory, high, or exemplary.

In contrast to the results reported last year, which indicated some confusion between the parent education and the parent participation and involvement components, the schools this year appear to have developed distinct programs.[1] There was a major increase in the quality and participation levels of ECE parents in parent education from the first to the second year.

Health and auxiliary services. According to the self-report information from the product evaluation report, the major auxiliary services objectives for kindergarten through grade twelve schools funded by ECE, ESEA Title I, and EDY were related to providing pupil personnel and health services. Of the objectives listed, approximately 65 percent referred to services provided, while 35 percent were based on changes in pupil or parent behavior or performance (see Appendix A-18). Specific objectives reported most frequently related to providing health screening, psychological diagnosis, referral services, health examinations, and health education. The least frequently mentioned objectives were related to improving nutrition, library skills, discipline, and parent-child relationships.

Pupil personnel services that helped most to achieve component objectives included—in order of frequency—individual counseling, psychological diagnosis, psychological services, and parent counseling. The major health services offered were vision screening, health education, health diagnosis, and nursing. The most common library and media activities included the provision of materials, library instruction, personnel, and general services.

The majority of schools provided most of the services called for in their school plans. Services most often reported as fully implemented included health screening, referral services, and nursing. Those most frequently listed as partially implemented were health education, home visits, and group counseling. Services planned but not provided typically included nutritional education and group counseling. The auxiliary services most frequently added to the program were speech therapy, nutrition, and classroom cooking (see Appendix A-23).

Analysis of program reports showed that 48 percent of the evaluations of services were determined by subjective judgments; 33 percent, by enumeration data; and 19 percent, by objective measurements. Positive results were most often related to health and nutritional objectives. Negative results were most frequently related to improving school attendance and reducing learning disabilities.

The in-depth sample of 302 schools rated the level of effectiveness of specific auxiliary services in meeting their school objectives. Pupil personnel services ratings were 91 percent "effective" or "very effective." The most effective were speech therapy, welfare and attendance services, home visits, and learning disability diagnosis. Health services were rated as 96 percent "effective" or "very effective." The most effective were speech and hearing screening, vision screening, use of health aides, and nursing. Reports from 87 schools included ratings of library services. Ninety-one percent of the ratings were "effective" or "very effective." The most effective services provided were mobile centers, learning centers, general services, and facilities.

Of the specific results reported by 302 schools in the in-depth surveys, 62 percent included changes in student behavior or performance. Only 33 percent were stated in terms of services provided. These results reflect a much greater emphasis on program outcomes than project objectives had indicated. In contrast, ECE schools sampled showed services, or inputs, receiving the most emphasis.

Positive results reported in the product evaluation report in relation to stated objectives are presented in Appendix A-18. From the resulting improvement in personal health, attitude, self-image, health knowledge, academic achievement, and adjustment to school, it is evident that auxiliary services were effective in these school programs. Relatively few schools, however, reported improvement in the areas of interpersonal relations, learning disabilities, or developing children's potential as a result of auxiliary services provided.

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[1] *Early Childhood Education First Annual Evaluation Report.* Sacramento: California State Department of Education, 1975, p. 3.

TABLE 13

MAR Ratings of the Quality of Parent Participation in ECE Schools, 1974-75 (N=913)

Item rated	Percent of schools receiving each rating					
	No evidence	Needs improvement	Shows promise	Satis-factory	High	Exemplary
The school advisory committee meets regularly and effectively represents parents and the community.	1	1	6	30	50	12
Parents are regularly involved in: Program planning	0	3	14	40	37	6
Assistance in classroom	1	3	12	28	44	12
Other supportive assistance	0	1	8	32	48	11
Program evaluation	1	4	18	44	29	4
There is an active program to arouse parent interest and enlist support.	0	0	9	30	47	14
The program encourages home-school communication in easily understood language.	0	0	5	29	54	12

TABLE 14

MAR Ratings of the Quality of Parent Education in ECE Schools, 1974-75 (N-913)

Item rated	Percent of schools receiving each rating					
	No evidence	Needs improvement	Shows promise	Satis-factory	High	Exemplary
Parents participated in designing a parent education program which reflects their needs and interests.	0	3	19	43	31	4
Parents are participating in the parent education program.	1	4	20	42	30	3

The ECE program requires a health needs assessment, but no other health or auxiliary areas are mandated. In ECE schools that included ESEA Title I and/or EDY funding, auxiliary services such as counseling and library facilities must be provided for ESEA Title I and EDY participating students. Most ECE schools are providing a comprehensive health education program and are following up the needs assessment with referrals and services. In the responses received from 144 ECE schools in the in-depth sample, 72 percent reported achieving their objectives. The most frequently used objective related to improvement in student health. The need for health services was determined by teacher-staff observations and surveys, parental inputs, and student performances and surveys.

The ECE schools offering health education programs along with other services reported that they had either fully developed a complete health education continuum or had none at all. The schools also utilized certain community health resources if they were available in the area. Since some rural areas had very limited local resources, extensive outreach efforts were provided to meet the needs of students in small schools.

The quality rating of health and auxiliary services in the MAR process was based on meeting the needs of individual students through health services screening/referral and follow-up, guidance services screening/referral and follow-up, provision of bilingual counselor/psychologists fluent in the students' language(s), use by the teachers of health screening data, and provision of a comprehensive health education program. As Table 15 indicates, the quality of the program in these areas was rated in more than 90 percent of the schools as satisfactory, high, or exemplary. It should be noted that for one item, the provision of bilingual counselors, 64 percent of the schools fell within the area of no evidence or not needed. This figure represents 588 schools. In 584 the item was left blank. In four schools, the item was rated as 0, an indication that such services were needed and that no evidence of their existence was found.

From the responses received in the sample data, and from the MAR data, it appears that integration of health and auxiliary services with the total educational program was the goal of most schools and was occurring.

Program Evaluation at the Local Levels

All school level plans contained evaluation and dissemination provisions which were parallel to the activities proposed. Since schools were required to report to the state on the effectiveness of these activities at the conclusion of the program, the data submitted to the state were considered evidence of the evaluation process at the local level.

The in-depth study information for ECE, ESEA Title I, and EDY revealed that 26 percent of the reporting schools indicated parent participation in the evaluation of the local school was accomplished through advisory committees. Parent responses on surveys and questionnaires were used in 21 percent of the schools. Objectives relating to parent participation in evaluation were achieved or exceeded in 75 percent of the schools.

Summary of the Section

As indicated in the beginning of this section, the information provided gives the reader clear indications of the effect of the total reform effort in a variety of areas. In order to gain a broader impression of the net result, the reports from five ECE schools with the highest MAR scores (scores from 346 to 423) were reviewed to obtain an impression of the characteristics that appeared to distinguish a "good" school. The impression centered around two common themes–a well organized management system in the school and the classroom and a combination of "dedicated and enthusiastic" parents and staff. Words such as "warm," "friendly," and "well managed," characterized the reports of the consultants who visited the schools.

In comparison, the ratings of the five lowest ECE schools (scores from 36 to 169) were also reviewed for common characteristics. The contrast was striking. The lowest schools were commended for their "evident concern," "effort," and "attempting to improve communication." The negative comments covered several areas: (1) lack of compliance with federal and state guidelines; (2) poor management of staff and resources; (3) lack of well defined or balanced curriculum; and (4) inadequate participation of the advisory committee. Both groups of schools contained middle and low socioeconomic students, and both groups were concentrated in three areas of the state: Los Angeles County, the San Francisco Bay Area, and the southern San Joaquin Valley.

Systematic changes are occurring in the manner in which schools are providing services to students. These changes are based on systematic assessment of the needs of the local community, are planned, and are evaluated. These locally developed programs include individualized, diagnostic instruc-

TABLE 15

MAR Ratings of the Quality of Health and Auxiliary Services in ECE Schools, 1974-75 (N=913)

Item rated	Percent of schools receiving each rating					
	No evidence or not needed	Needs improvement	Shows promise	Satis-factory	High	Exemplary
Health services-physical, visual, auditory, dental, speech, psychological-meet the needs of individual students through:						
Screening/referral	0	0	4	34	54	8
Follow-up	0	0	4	36	53	7
Guidance services meet the needs of individual students through:						
Screening/referral	1	1	8	43	42	5
Follow-up	1	1	8	44	41	5
Bilingual conunselors/psychologists fluent in the language of students are available.	64	1	3	20	11	1
Health screening data are utilized by the teachers.	1	0	1	45	51	2
There is evidence of a comprehensive health education program	0	1	8	56	33	2

tional procedures, goals and objectives, staff development and inservice training, parent participation, parent education, and concern for health and auxiliary services.

Student Achievement Findings

This section on student achievement findings is designed to give the reader an overview of the impact of the various supplemental programs on the achievement of California students who participated in ECE, ESEA Title I, and EDY. The information is reported by the various funding sources. Although the school was used as the unit of analysis, it should be kept in mind that only participating students' scores were used to determine the school score. In ECE funded programs, this would include the entire K-3 population. In ESEA Title I and EDY funded programs, only the scores of those selected students who qualified for and participated in the programs were used. School means were weighted by number of participants.

The first part of this section on student achievement describes the findings of all kindergarten through grade three schools which utilized ECE funds, no matter what other funds were used. The second part deals with schools receiving ESEA Title I monies. The third section describes EDY. The last part on the achievements in bilingual/cross-cultural and multicultural activities describes these programs funded by any sources.

ECE Umbrella, Kindergarten Through Grade Three

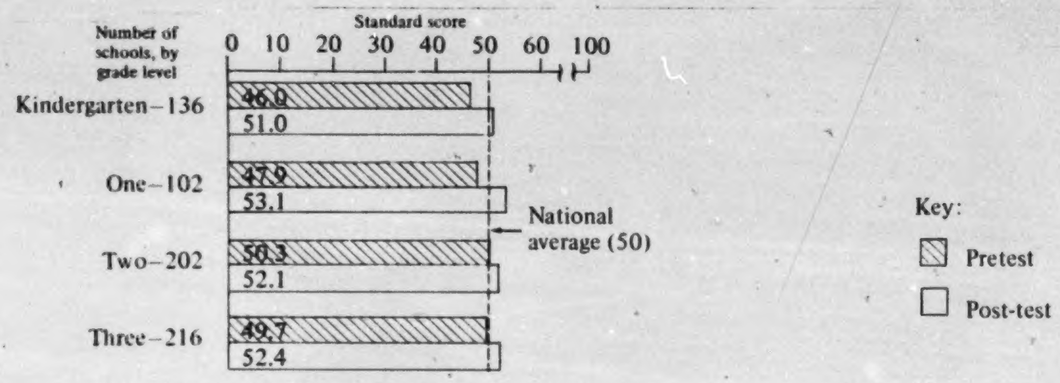
Reading. Standardized achievement data were analyzed by conversion from raw scores to standard scores and by use of grade equivalent scores. A comparison of standard score gains from pretest to post-test in the several combinations of ECE multifunded schools is presented in Figure 7 (see also Appendix A-6). When examining the data expressing standard score results, the reader should keep the following in mind: A standard score of 50 equals the national average. Looking at the early childhood education only graph in Figure 7, the reader will note that the pretest scores for kindergartens averaged 46.0. The post-test score was 51.0. This represented 5.0 points more growth than would have been expected in one year of instruction. It also indicated that at kindergarten, the score exceeded the national average in reading achievement on the post-test.

An inspection of Figure 7 shows that post-test scores for grade one also exceeded the national average, while grades two and three were closer to the national average on the post-test than on the pretest. In all grade levels (K-3), schools having ECE only funds exceeded the national average on the post-test. In schools having a combination of ECE and the Miller-Unruh reading program funding, post-test scores exceeded the national average for students in kindergarten and grades one and two.

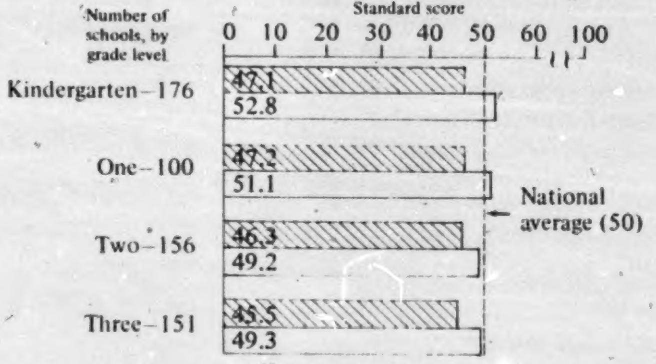
Grade equivalent gain scores in reading were calculated for grades one through three in all combinations of ECE funded schools and are presented in Table 16. With an elapsed time of 8.2 months between pretesting and post-testing, all grade levels typically achieved one month's gain or more in measured reading ability for each month of instruction. While performance varied among combinations of the several funding sources (see Appendix A-9), there was a trend for grade equivalent gain scores across all funding sources in the primary grades to approximate the grade level expectancies of the students.

The Department of Education used reading achievement scores from the California assessment program (CAP) as an additional check on state evaluation of programs. All ECE schools were compared with non-ECE schools in terms of four indices: (1) average socioeconomic status; (2) number of third grade students; (3) total percentage minority enrollment; and (4) 1974-75 third grade predicted score on the CAP reading achievement test. The frequency distribution of ECE and non-ECE schools across the four indices is shown in Appendix C-11. Much variation exists among both ECE and non-ECE schools. Yet, it can be seen that compared to non-ECE schools, the ECE schools on the average had indices of lower socioeconomic status, larger school size, and higher percentage minority enrollment.

Longitudinal profiles of performance in reading achievement were computed for ECE schools in the program for one year, ECE schools in the program for two years, and a matched group of non-ECE schools. If schools were not funded for a third year, they were not included in this sample. Reading achievement gain scores from CAP, as presented in Table 17, follow the same schools for two years: 1973-74 and 1974-75. The reading achievement scores made by second graders in 1973-74 were subtracted from their scores on an identical reading achievement test taken as third graders in 1974-75. As shown in Table 17, both one and two year ECE schools showed statistically significant higher gain scores than non-ECE schools showed.



Early Childhood Education Only



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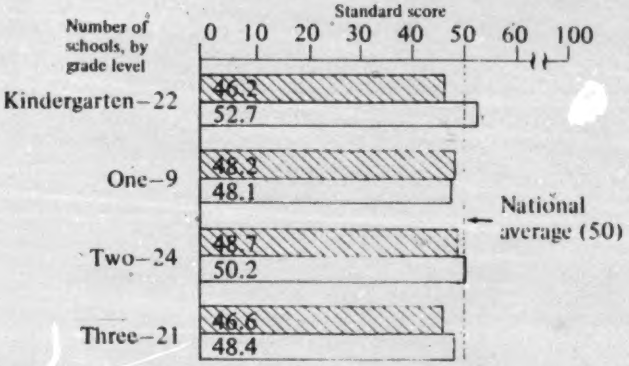
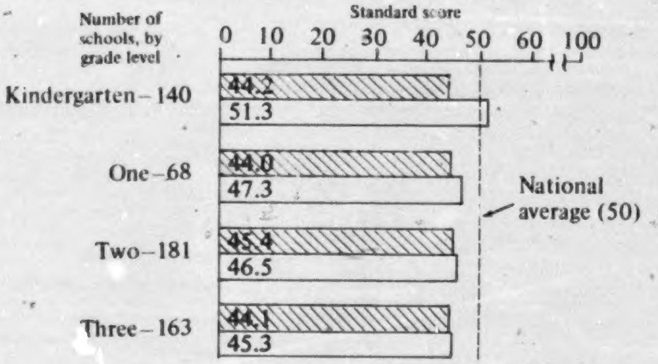


Early Childhood Education/
Educationally Disadvantaged Youth



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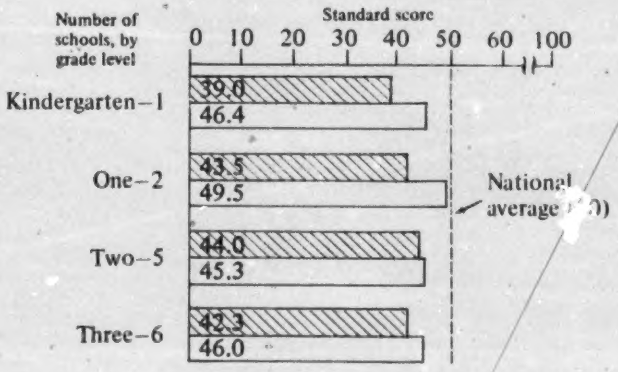
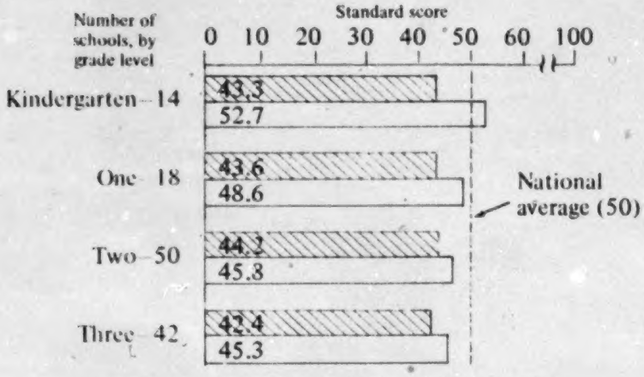
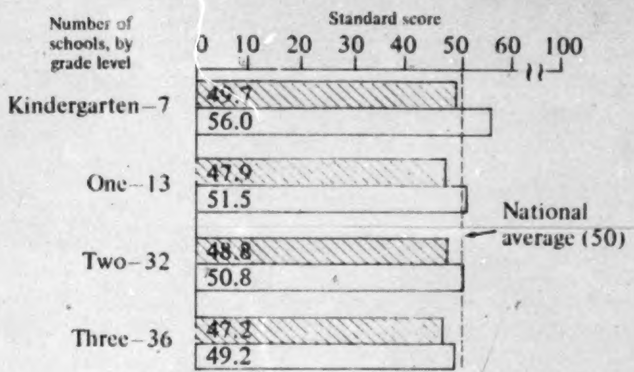


Early Childhood Education/
Educationally Disadvantaged Youth/Miller-Unruh*

Fig. 7. Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in early childhood education, 1974-75



Early Childhood Education/Title I/ Educationally Disadvantaged Youth/Miller-Unruh*



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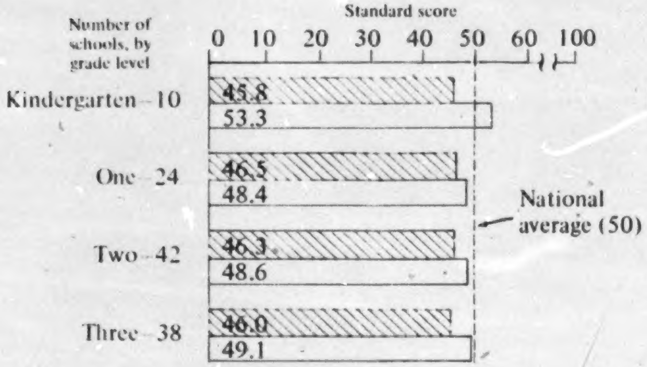

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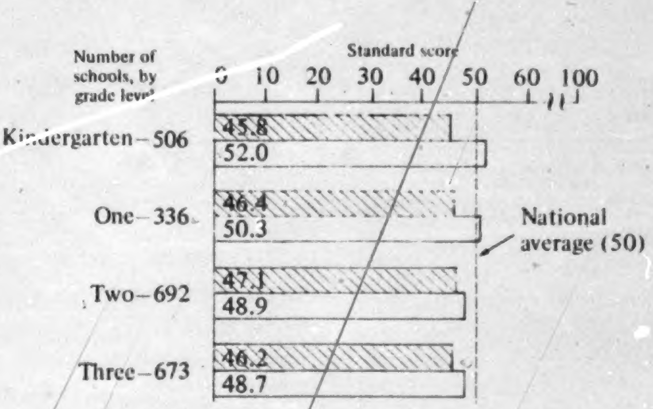

All Early Childhood Education†

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*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

†A weighted summary of all combinations of funding sources shown above.

Fig. 7. (continued) Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in early childhood education, 1974-75

Since two-year ECE schools showed slightly greater gains than one year ECE schools (15.7 vs. 15.5), this is viewed as a positive result for the ECE program for at least two reasons. First, it puts to rest the contention that ECE would have only a temporary effect that would vanish in the second year of operation. Instead, there appears to be a cumulative effect over years. Second, the two-year ECE schools have a somewhat lower index of socioeconomic status than the one year schools, which indicates that their gains would generally have been predicted to be smaller than those of the one-year ECE schools.

Language development. The usable data from language development tests which were submitted from ECE schools in grade equivalent scores are reported by funding source and grade level in Table 18. With the exception of grade one programs funded by the ECE, EDY, Miller-Unruh combination, programs in all grades and funding combinations gained more than the expected 1.0.

The group achievement tests used to measure language development activities usually assessed oral receptive language at the primary level. Schools using criterion-referenced instruments were able to measure expressive language development for individual students. Such information could not be aggregated at the state level.

Mathematics. Both standard score and grade equivalent gains were calculated for students who

TABLE 16

Average Months of Gain in Reading Grade Equivalent Scores for Each Month of Reading Instruction for Schools Participating in Early Childhood Education, 1974-75

Funding source	Number of schools and average months of gain for each month of instruction, by grade level					
	Grade one		Grade two		Grade three	
	Schools	Gain	Schools	Gain	Schools	Gain
ECE only	77	1.2	161	1.2	162	1.2
ECE/ESEA Title I	87	1.2	133	1.1	138	1.2
ECE/EDY	7	1.3	15	1.1	13	1.1
ECE/ESEA Title I/EDY	60	1.1	138	.9	135	.9
ECE/Miller-Unruh*	14	1.3	34	1.3	38	1.3
ECE/ESEA Title I/Miller-Unruh*	19	1.3	38	1.1	32	1.1
ECE/EDY/Miller-Unruh*	3	1.2	3	1.3	3	1.1
ECE/ESEA Title I/EDY/ Miller-Unruh*	11	1.2	40	1.0	34	1.0
All ECE combined	278	1.2	562	1.1	555	1.1

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

TABLE 17

Reading Achievement Gain Scores for ECE Schools and Matched Groups of Non-ECE Schools, 1973-74 to 1974-75, from California State Assessment Program Data*

Type of school	Third grade scores, 1974-75	Second grade scores, 1973-74	Gain scores (Number correct, 1974-75, less number correct, 1973-74)
Two years in ECE (N = 427)	79.2	63.5	15.7[†]
One year in ECE (N = 658)[‡]	81.0	65.5	15.5[†]
Matched non-ECE schools (N = 3,326)	80.6	65.6	15.0[†]

*For a technical discussion of these data, see Appendix C-12.

[†] $\alpha = .001$

[‡] One year schools included those entering ECE in 1974-75, those moving from partial to full funding in 1974-75, and those few schools in districts which received no expansion funding for 1974-75.

received instruction in mathematics, using the school as the unit of analysis. Standard scores on the post-test indicated that kindergarten and grade one exceeded the national average, while grades two and three were less than one point below the national average. In all cases, post-test scores were higher than pretest scores.

ECE-only schools, grades one through three, exceeded the national averages in mathematics on the post-test, with kindergarten scoring at the national average. The patterns of post-test scores in schools having ECE/ESEA Title I and ECE/EDY funding were mixed: for ECE/ESEA Title I schools, grades one and two exceeded national averages; for ECE/EDY schools, kindergarten and grade three exceeded the national average. Figure 8 presents the mathematics data by funding source.

A comparison of grade equivalent gain scores showed that, with an average elapsed time of eight months between testing, grades one through three demonstrated an average increase of 1.2 months in measured mathematics skills for each month of instruction. The findings by grade level and funding source are presented in Table 19. The greatest gains were found in schools having ECE only and ECE/ESEA Title I funding.

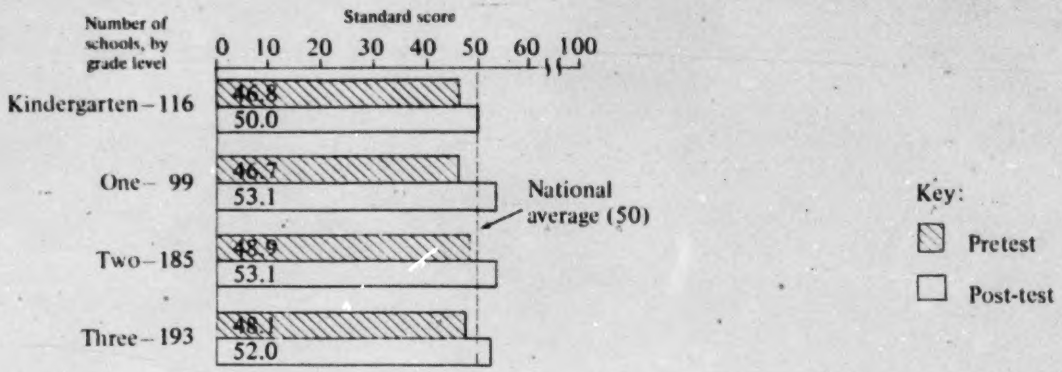
A comparison of grade equivalent gains in reading and mathematics was made between first-year ECE schools in 1973-74 and first-year ECE schools in 1974-75. Table 20 shows the comparisons of the respective first-year schools. The data presented indicate that during their first year of operation, schools entering ECE in 1974-75 showed significantly greater gains than did schools in their first year of operation in 1973-74. Since it was not possible to match these schools, and the schools reporting in grade equivalent scores in 1974-75 represented less than half the total number of schools reporting, these data should be interpreted with caution.

TABLE 18

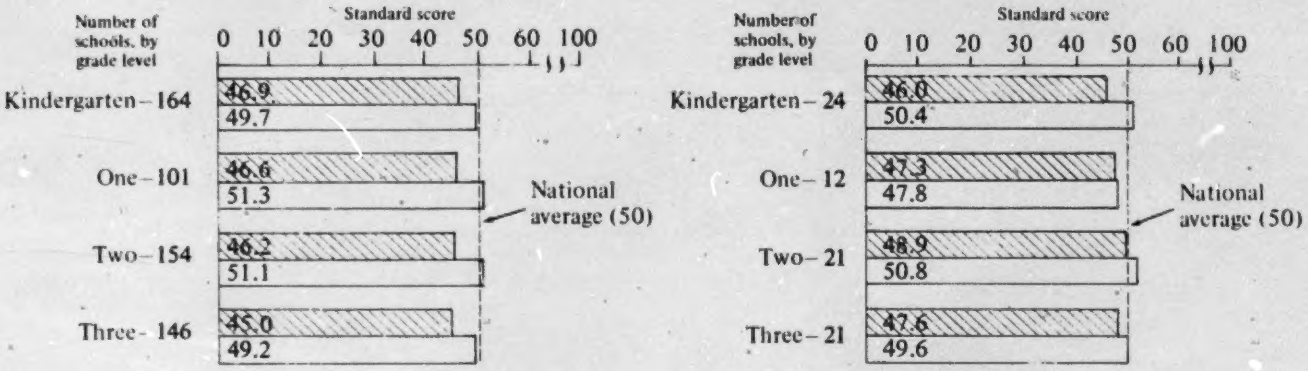
Average Months of Gain in Language Grade Equivalent Scores for Each Month of Language Instruction for Schools Participating in Early Childhood Education, 1974-75

Funding source	Number of schools and average months of gain for each month of instruction, by grade level					
	Grade one		Grade two		Grade three	
	Schools	Gain	Schools	Gain	Schools	Gain
ECE only	51	1.2	74	1.5	74	1.7
ECE/ESEA Title I	57	1.3	76	1.6	78	1.6
ECE/EDY	4	1.7	5	1.2	5	1.6
ECE/ESEA Title I/EDY	33	1.2	43	1.3	44	1.3
ECE/Miller-Unruh*	4	1.5	11	1.7	9	1.9
ECE/ESEA Title I/Miller-Unruh*	14	1.6	20	1.3	15	1.5
ECE/EDY/Miller-Unruh*	1	.7	1	2.4	1	1.1
ECE/ESEA Title I/EDY/ Miller-Unruh*	10	1.2	15	1.3	12	1.2
All ECE combined	174	1.3	245	1.5	238	1.6

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

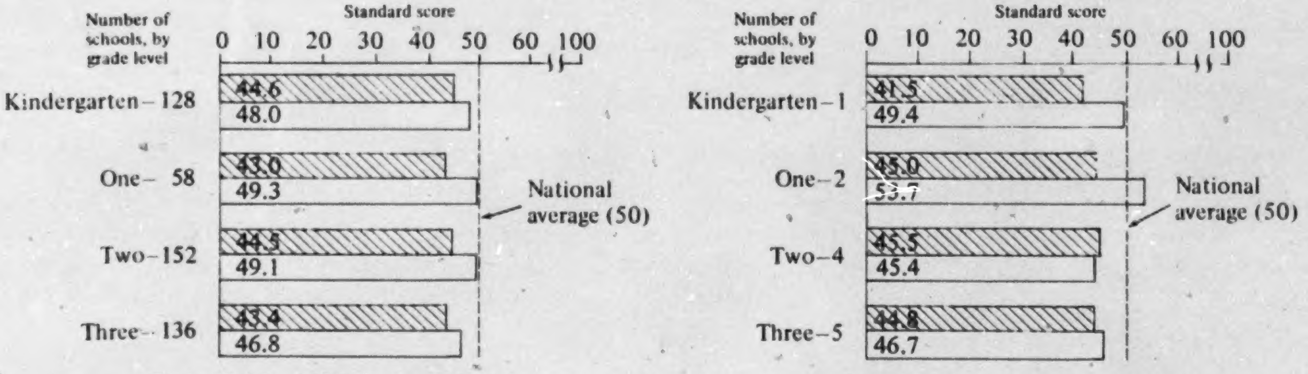


Early Childhood Education Only



Early Childhood Education/Title I

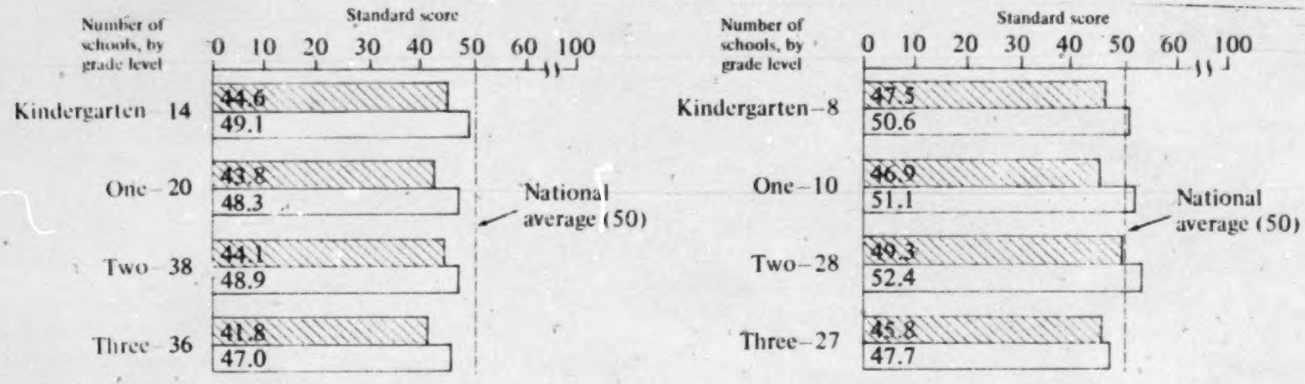
Early Childhood Education/ Educationally Disadvantaged Youth



Early Childhood Education/Title I/ Educationally Disadvantaged Youth

Early Childhood Education/ Educationally Disadvantaged Youth/Miller-Unruh*

Fig. 8. Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in early childhood education, 1974-75



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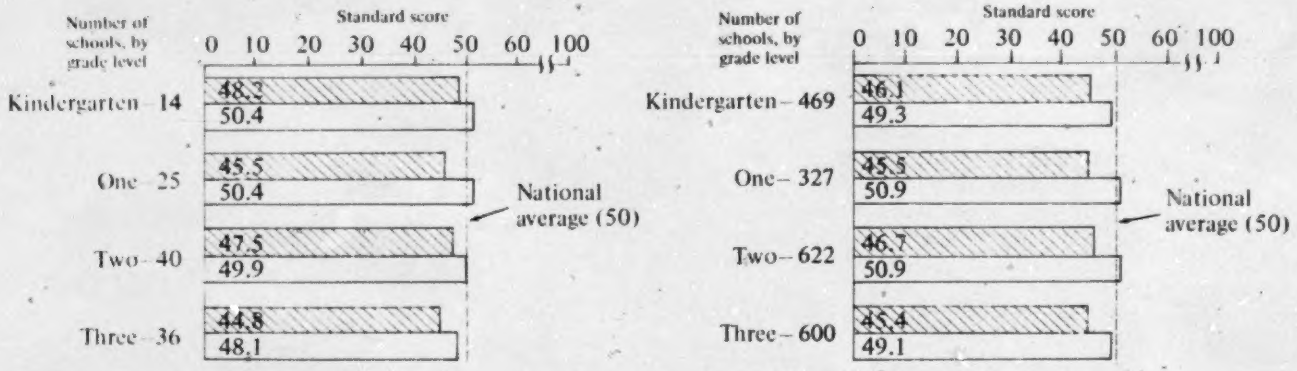
Early Childhood Education/Miller-Unruh*



Early Childhood Education/ Title I/Miller-Unruh*

All Early Childhood Education†

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*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

†A weighted summary of all combinations of funding sources shown above.

Fig. 8. (continued) Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in early childhood education, 1974-75.

The data in Table 20 appear to refute the argument raised by critics of the data presented in the 1973-74 evaluation report that the first group of schools in ECE were such a select, highly motivated group that the "Hawthorne effect" was responsible for their gains in the first year, and, thus, schools' scores in subsequent years would therefore show lower achievement gains.

ESEA Title I

Reading. A comparison between pretest and post-test standard scores in reading indicated a typical increase in relative achievement at virtually all grade levels. The findings for programs augmented by ESEA Title I and ESEA Title I in combination with EDY and Miller-Unruh resources are presented in Figure 9. As an average, kindergarten through grade eight increased in reading by 2.3 standard score points on the post-test compared to the pretest. Grades nine through twelve were not included in standard score comparisons because of irregularities in testing and reporting procedure. They are included in grade equivalent comparisons.

As can be seen in Table 21, grade equivalent gain scores by grade levels showed that for ESEA Title I across all grade levels, there was a typical gain of 1.1 months in measured reading ability for each month of reading instruction. Grade twelve scores are not given, for the number was too small to enable analysis.

Language development. Grade equivalent gain score information was compared for several multifunded programs in grades one through twelve. With 7.5 months of elapsed time between pretesting and post-testing, there was an average of 1.3 months' growth for each month of instruction in measured language skill across all programs and grade levels. A summary of the average month's gain per month of instruction by funding source and grade level is shown in Table 22. Again, grade twelve scores were too small to enable analysis. A listing of average pretest and post-test grade equivalent scores is presented in Appendix A-9.

Mathematics. Standard score results in mathematics revealed that, as an average, all grade levels receiving ESEA Title I funding succeeded in moving closer to the national norm. In programs served by the combined resources of ESEA Title I/EDY/Miller-Unruh, a gain of 3.6 standard score points in mathematics achievement was seen. Comparisons of pretest and post-test standard scores by funding source and grade levels are shown in Figure 10.

Comparisons of grade equivalent scores showed that, with an elapsed time of 8.0 months between pretesting and post-testing, ESEA Title I grades one through eleven averaged 1.2 months' gain in mathematics for each month of instruction in the program as can be seen in Table 23. No grade twelve scores are given, for the number was too small to enable the making of a generalization regarding student gains.

TABLE 19

Average Months of Gain in Mathematics Grade Equivalent Scores for Each Month of Mathematics Instruction for Early Childhood Education Schools, 1974-75

Funding source	Number of schools and average months of gain for each month of instruction, by grade level					
	Grade one		Grade two		Grade three	
	Schools	Gain	Schools	Gain	Schools	Gain
ECE only	74	1.5	139	1.3	136	1.5
ECE/ESEA Title I	75	1.5	131	1.3	133	1.4
ECE/EDY	5	1.3	12	1.1	14	1.3
ECE/ESEA Title I/EDY	58	1.4	107	1.3	106	1.3
ECE/Miller-Unruh*	13	1.4	32	1.1	32	1.5
ECE/ESEA Title I/Miller-Unruh*	21	1.4	38	1.1	31	1.3
ECE/EDY/Miller-Unruh*	1	1.1	2	.9	3	.6
ECE/ESEA Title I/EDY/Miller-Unruh*	13	1.5	26	1.1	22	1.4
All ECE combined	260	1.5	487	1.3	477	1.4

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

Educationally Disadvantaged Youth

Reading. Standard score gains in reading achievement indicated that all grade levels increased in relative position to the national average for their grade level. A comparison of pretest and post-test scores for programs served by the combined resources of EDY and Miller-Unruh revealed an average gain of 2.7 standard score points during the school year. The findings by grade level and funding sources are shown in Figure 11. Grades nine through twelve were not included in standard score comparisons because of irregularities in testing and reporting procedures.

An analysis of grade equivalent scores for grades one through eight participating in reading programs augmented with funds provided by EDY and EDY in combination with Miller-Unruh indicated that, as an average, all grade levels attained one month's growth in reading achievement for each month of instruction. A summary of gain scores by grade level is presented in Table 24. Grades nine through twelve were not included in the grade equivalent comparisons because of irregularities in testing and reporting procedures.

Language development. Grade equivalent gain scores were computed for language development. Results indicated that grades one through eight averaged 1.2 months' gain in measured language skill for each month of participation in the program. A summary of the gain scores by grade level is shown in Table 25.

Mathematics. Pretest and post-test standard score comparisons in mathematics revealed that, as an average, schools that participated in EDY and EDY in combination with Miller-Unruh resources demonstrated positive student gains. Findings indicated that all grade levels closed the distance between their pretest achievement scores and the national average by increasing 2.3 standard score points during the school year. Average pretest and post-test scores by grade level for reporting schools are shown in Figure 12. Grades ten through twelve had such small numbers that analysis of the data was not possible.

Analysis of grade equivalent test data revealed that grades one through eight programs served through EDY/Miller-Unruh resources averaged 1.0 month's gain in measured mathematics skill for

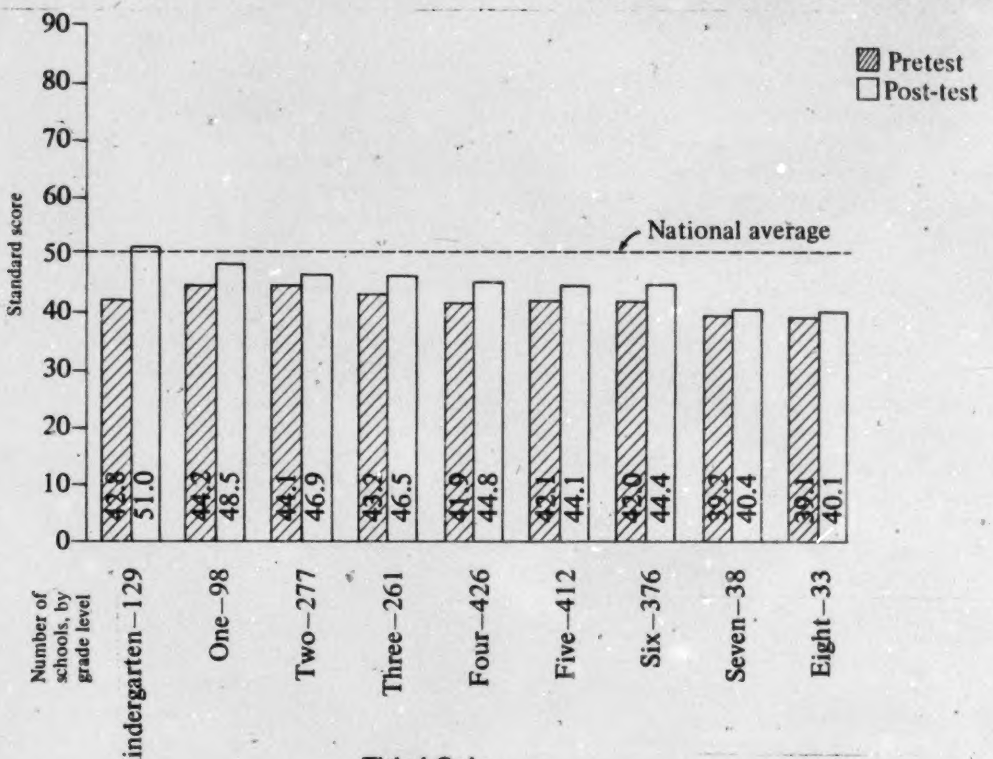
TABLE 20

Average Increase in Grade Equivalent Scores in Reading and Mathematics Between Pretest and Post-test for ECE Schools, 1973-74 and 1974-75 in Their First Year of Operation

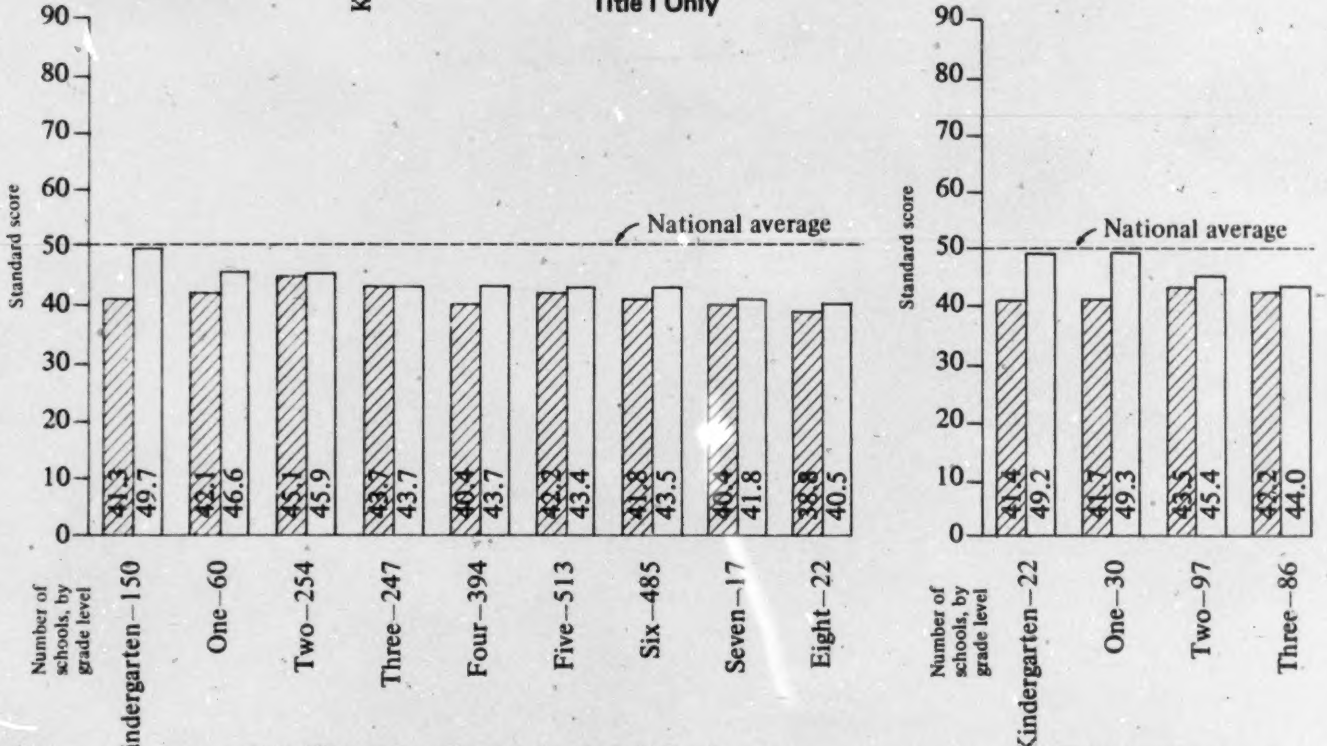
Item tested and grade	1973-74 gains for schools entering ECE in 1973-74* (N = 814)	1974-75 gains for schools entering ECE in 1974-75† (N = 491)	Level of significance
Reading			
Grade one	.75	.98	.001
two	.83	.95	.001
three	.83	1.04	.001
Mathematics			
Grade one	.84	1.07	.001
two	.91	.94	N/S
three	.99	1.08	.016

*Schools entering ECE in 1973-74 that reported usable grade equivalent scores in reading and mathematics for their 1973-74 program.

†Schools entering ECE in 1974-75, schools moving from partial to full funding in 1974-75, or schools from those few schools in districts that received no expansion funding for 1974-75 and that reported usable grade equivalent scores in both reading and mathematics for their 1974-75 program.



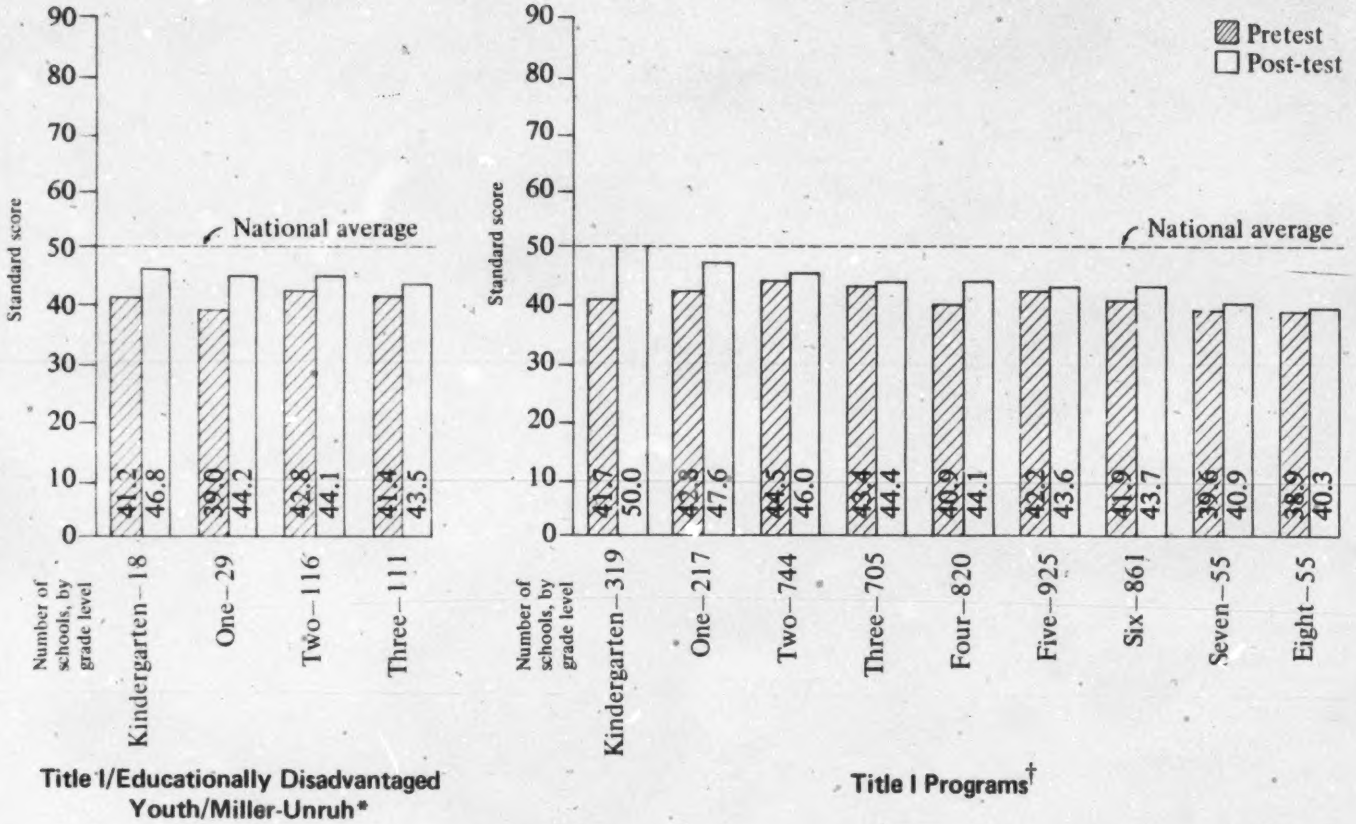
Title I Only



Title I/Educationally Disadvantaged Youth

Title I/Miller-Unruh*

Fig. 9. Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in ESEA Title I funded programs, 1974-75



Title I/Educationally Disadvantaged Youth/Miller-Unruh*

Title I Programs†

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*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

† A weighted summary of all combinations of funding sources shown above.

Fig. 9. (continued) Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in ESEA Title I funded programs, 1974-75

each month of participation in the program. A summary of gain scores by funding sources and grade levels is displayed in Table 26. Grades nine through twelve were not included in the comparisons because of small numbers and irregularities in testing and reporting procedures.

Bilingual/Cross-cultural and Multicultural Education

The two instructional areas of bilingual/cross-cultural and multicultural education are served through all funding sources and, consequently, are reported in this separate section of the report.

Bilingual/cross-cultural education. All schools with limited and/or non-English speaking students were required to develop programs to meet those students' needs. Each school which had an enrollment of which 15 percent or more were limited and/or non-English speaking students and which received supplemental funding during the 1974-75 school year was required to develop and submit a bilingual/cross-cultural component for those students.

A bilingual/cross-cultural approach to instruction can include various combinations of English, native language, English as a second language, and native language as a second language in the instructional areas of reading, mathematics, language, and multicultural education.

A total of 42,274 students with a primary language other than English participated in the bilingual/cross-cultural components of schools receiving additional federal or state funding. Of these students, 24,340 spoke English with limited fluency, 10,051 were non-English speakers, and 7,883

(Text continued on page 53)

TABLE 21

Average Months of Gain in Reading Grade Equivalent Scores for Each Month of Reading Instruction, by Grade Level, for ESEA Title I Funded Programs, 1974-75

	Average months of gain for each month of instruction (and number of schools), by grade level										
Funding source	1	2	3	4	5	6	7	8	9	10	11
Title I only	1.3 (60)	1.1 (185)	1.1 (200)	1.2 (317)	1.1 (297)	1.1 (273)	1.1 (24)	1.1 (21)	1.5 (48)	1.3 (35)	1.2 (20)
Title I/EDY	1.2 (44)	.9 (221)	.9 (231)	1.1 (267)	1.0 (422)	1.2 (387)	1.0 (31)	1.0 (31)	1.6 (34)	1.3 (19)	1.7 (12)
Title I/ Miller-Unruh*	1.2 (37)	1.0 (93)	1.0 (83)								
Title I/EDY/ Miller-Unruh*	1.2 (22)	.7 (84)	.9 (79)								
Weighted average (Total number of programs)	1.2 (163)	.9 (583)	.9 (593)	1.1 (584)	1.0 (719)	1.2 (660)	1.0 (55)	1.0 (52)	1.6 (82)	1.3 (54)	1.5 (32)

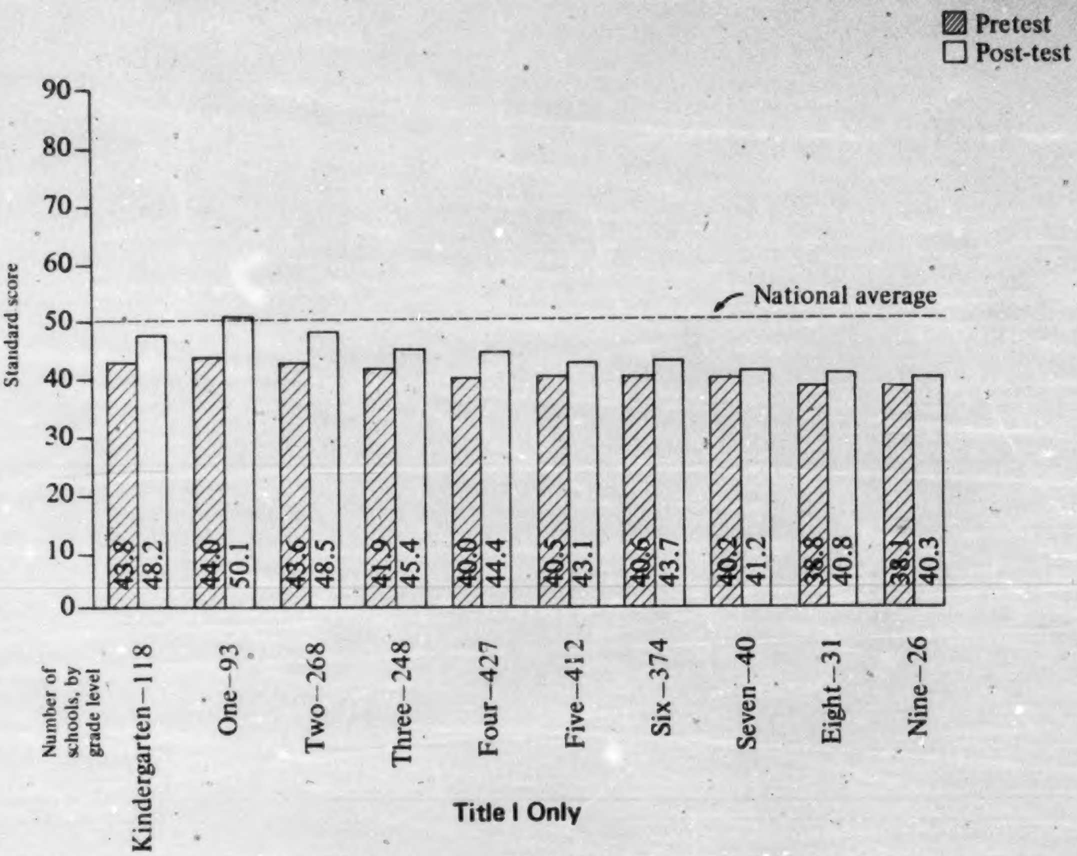
*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

TABLE 22

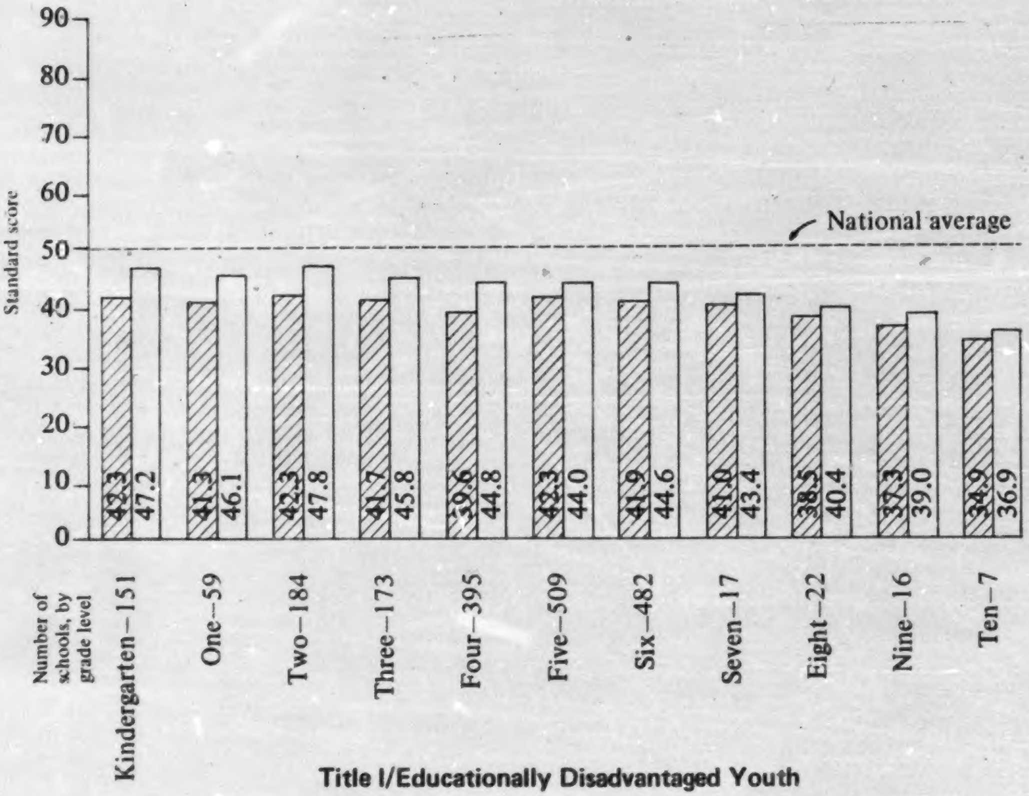
Average Months of Gain in Language Grade Equivalent Scores for Each Month of Language Instruction, by Grade Level, for ESEA Title I Funded Programs, 1974-75

	Average months of gain for each month of instruction (and number of schools), by grade level										
Funding source	1	2	3	4	5	6	7	8	9	10	11
Title I only	1.3 (26)	1.3 (49)	.9 (60)	1.3 (148)	1.5 (130)	1.5 (116)	.9 (8)	.9 (7)	1.6 (28)	1.9 (15)	1.2 (10)
Title I/EDY	1.3 (25)	1.7 (39)	1.3 (50)	1.2 (123)	1.3 (140)	1.1 (121)	.9 (13)	1.6 (11)	1.7 (10)	1.5 (7)	.5 (7)
Title I/ Miller-Unruh*	1.6 (22)	1.9 (38)	1.3 (34)								
Title I/EDY/ Miller-Unruh*	1.2 (11)	1.6 (20)	1.1 (21)								
Weighted average (Total number of programs)	1.3 (84)	1.6 (146)	1.2 (165)	1.2 (271)	1.4 (270)	1.2 (237)	.9 (21)	1.4 (18)	1.6 (38)	1.7 (22)	.9 (17)

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

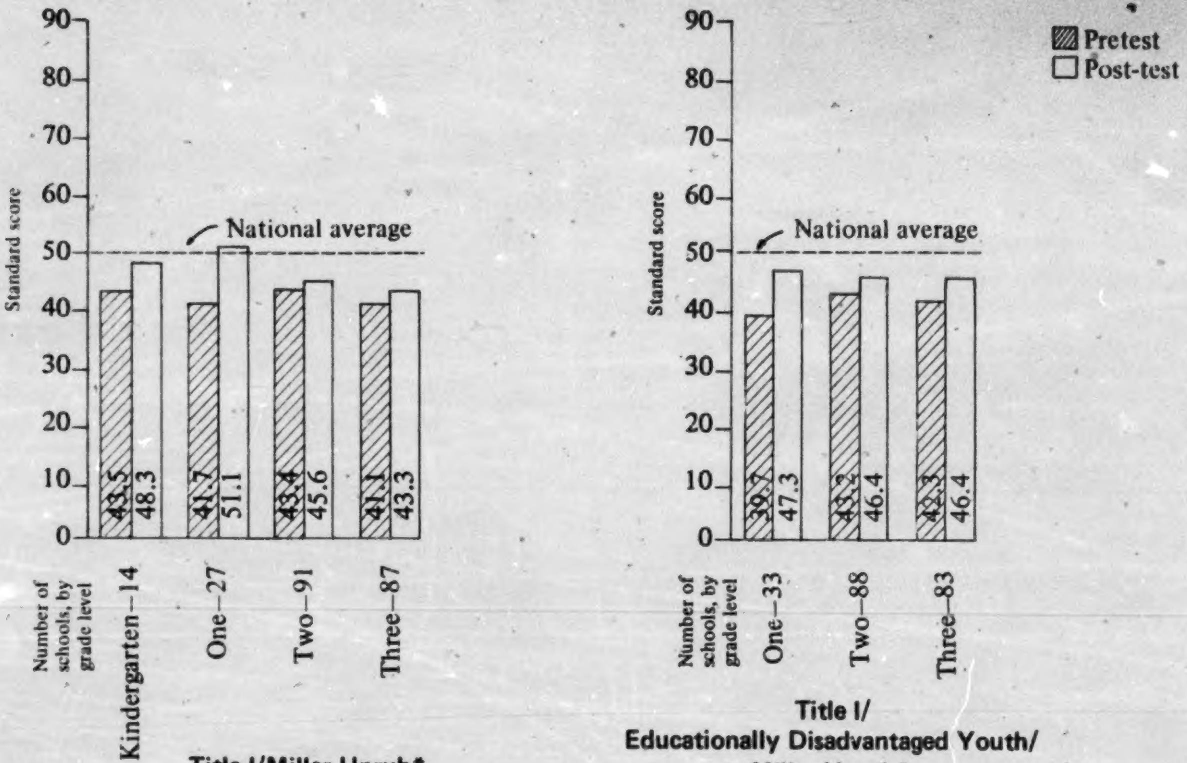


Title I Only



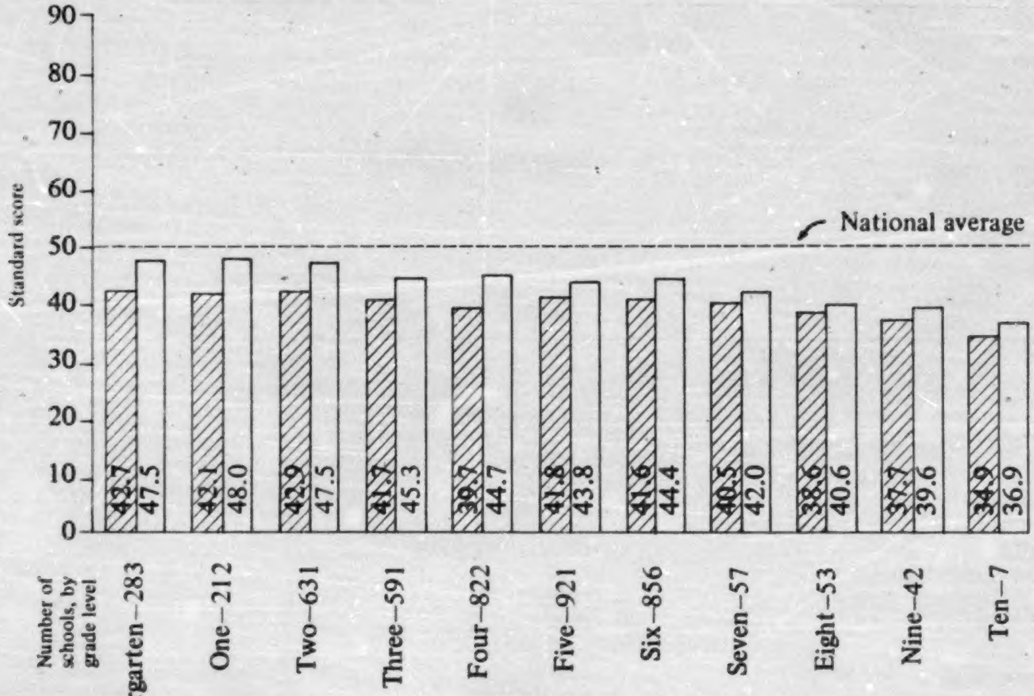
Title I/Educationally Disadvantaged Youth

Fig. 10. Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in ESEA Title I funded programs, 1974-75



Title I/Miller-Unruh*

Title I/
Educationally Disadvantaged Youth/
Miller-Unruh*



Title I Programs†

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*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

†A weighted summary of all combinations of funding sources shown above.

Fig. 10. (continued) Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in ESEA Title I funded programs, 1974-75 were fluent in English. Students with Spanish as their first language were the largest group in the bilingual/cross-cultural component, accounting for 38,823 of the participants (see appendixes A-3 and B-11).

Program objectives for all students were similar (see appendixes B-12 through B-17). Objectives for reading and language development could be classified into increased skills in these areas: more positive feelings, purchasing or developing materials with which to gain skills, and management of the program; whereas mathematics objectives related to instruction, measurement of student growth, and management of the program.

Schools reported that 82 percent of the objectives for reading, 81 percent for language development, and 80 percent for mathematics were "exceeded" or "achieved."

The kinds of program activities reportedly provided for students were similar. One major difference was that more native language activities were provided with greater frequency for limited and non-English speaking students than for students who were classified as fluent in English. These findings were observed in all instructional areas, as shown by data in appendixes B-18 through B-23.

Schools reported that 86 percent of their planned activities were implemented in reading, and 90 percent were implemented in mathematics.

An analysis of standard score reading achievement data shows that reading performance of limited-English speaking students is closing the gap toward the national average at all grade levels except fifth. Students in grade five maintained an average growth rate (see Appendix A-7). Standard score data for reading achievement tests of fluent English speaking students in the bilingual/cross-cultural component show that mean post-test scores for grades one through three are approaching the national average. Students in grades one through three showed greater gains than did students in grades four through six, although gains in reading for grades four through six also showed positive movement toward the national average (see Appendix A-7). Mean standard scores for grades seven through nine indicate gains in reading between the pretest and post-test period. The small number of participants in these grades warrants cautious interpretation of these results, however.

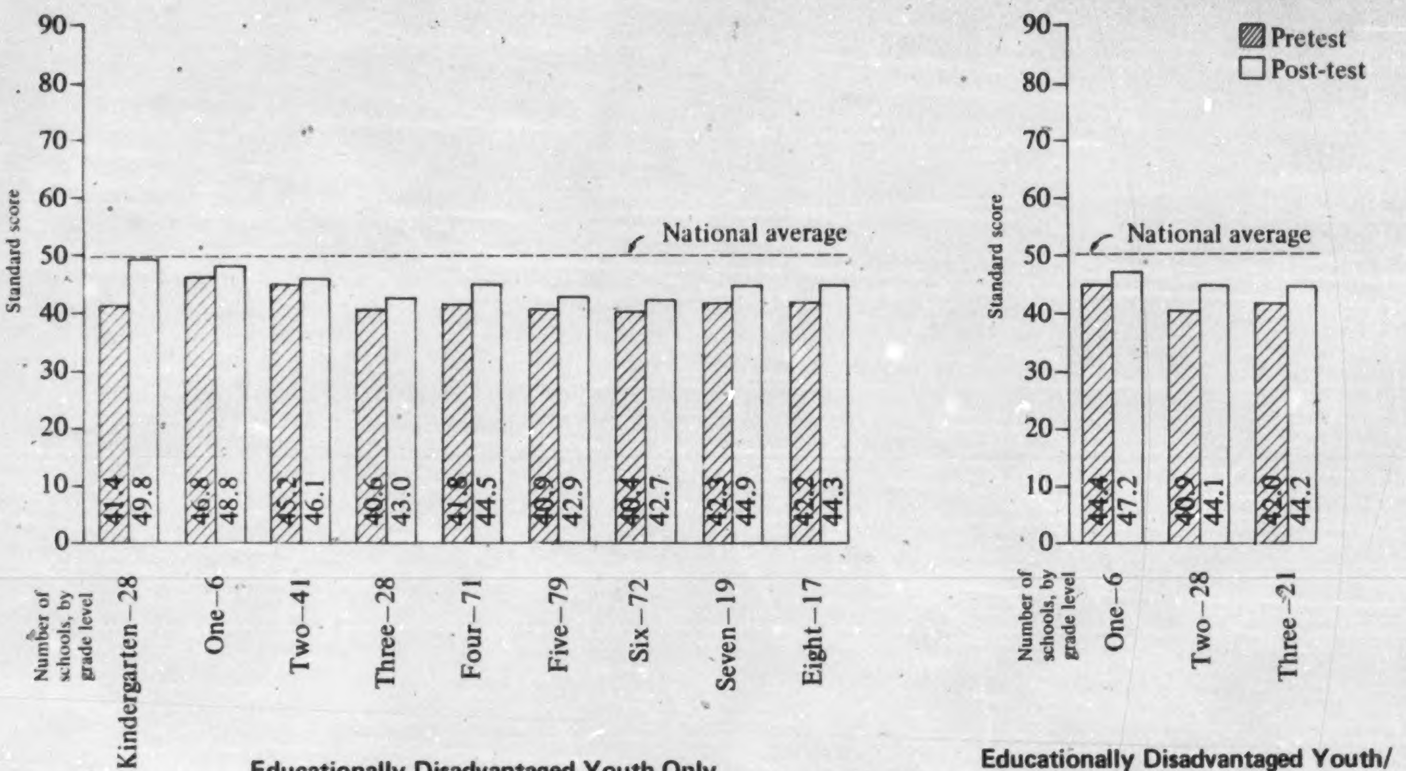
The achievement test data for language development were incomplete for students in the bilingual/cross-cultural component. No raw scores were

TABLE 23

Average Months of Gain in Mathematics Grade Equivalent Scores for Each Month of Mathematics Instruction for ESEA Title I Funded Programs, 1974-75

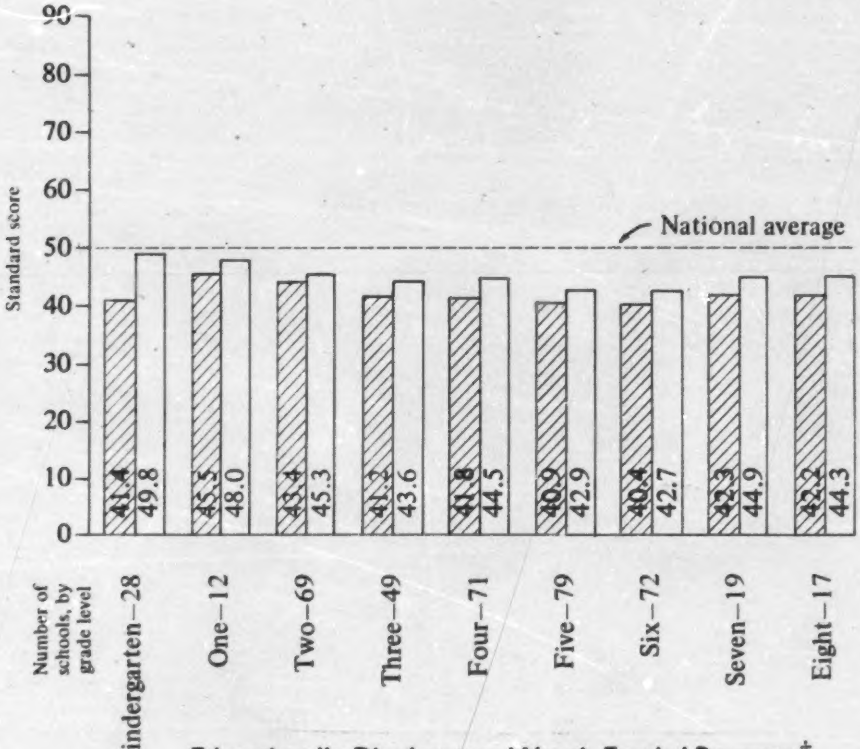
Funding source	Average months of gain for each month of instruction (and number of schools), by grade level										
	1	2	3	4	5	6	7	8	9	10	11
Title I only	1.5 (63)	1.3 (178)	1.3 (188)	1.3 (298)	1.1 (283)	1.1 (258)	1.0 (21)	1.4 (16)	1.6 (42)	1.3 (25)	1.6 (14)
Title I/EDY	1.5 (43)	1.3 (152)	1.4 (157)	1.3 (272)	1.1 (419)	1.3 (384)	1.0 (30)	1.1 (30)	1.6 (24)	1.3 (9)	1.1 (6)
Title I/ Miller-Unruh*	1.4 (35)	1.1 (84)	1.1 (77)								
Title I/EDY/ Miller-Unruh*	1.4 (26)	1.1 (51)	1.3 (51)								
Weighted average (Total number of programs)	1.5 (167)	1.2 (465)	1.3 (473)	1.3 (570)	1.1 (702)	1.3 (642)	1.0 (51)	1.2 (46)	1.6 (66)	1.3 (34)	1.4 (20)

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.



Educationally Disadvantaged Youth Only

Educationally Disadvantaged Youth/ Miller-Unruh*



Educationally Disadvantaged Youth Funded Programs†

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*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

†A weighted summary of all combinations of funding sources shown above.

Fig. 11. Weighted average pretest and post-test standard scores in reading achievement, by grade level, for schools participating in educationally disadvantaged youth funded programs, 1974-75

reported. The limited data reported in grade equivalent gains show a measurable language development growth for limited and non-English speaking as well as fluent English speaking students--indicating, as suspected, that the educational growth of limited and non-English speaking students was less than for fluent English speaking students (see Appendix A-10).

Mathematics achievement data for limited English speaking students show that post-test standard scores in mathematics increased over pretest standard scores at all grade levels (K-9). Achievement data for fluent English speaking students show that post-test mean standard scores for grades one and two are equal to the mean for the normative group. Average standard score gains for fluent English students at all grades are positive and moving toward the national average. Moreover, post-test standard score means are at or above the national average in mathematics achievement for grades one

TABLE 24

Average Months of Gain in Reading Grade Equivalent Scores for Each Month of Reading Instruction for EDY Funded Programs, 1974-75

Funding source	Average months of gain for each month of instruction (and number of schools), by grade level 1	2	3	4	5	6	7	8
EDY only	1.0 (9)	1.0 (36)	1.0 (36)	.9 (52)	.9 (53)	1.1 (49)	1.2 (16)	1.2 (13)
EDY/Miller-Unruh*	1.0 (6)	.9 (18)	.9 (18)					
Weighted average (Total number of programs)	1.0 (15)	1.0 (54)	1.0 (54)	.9 (52)	.9 (53)	1.1 (49)	1.2 (16)	1.2 (13)

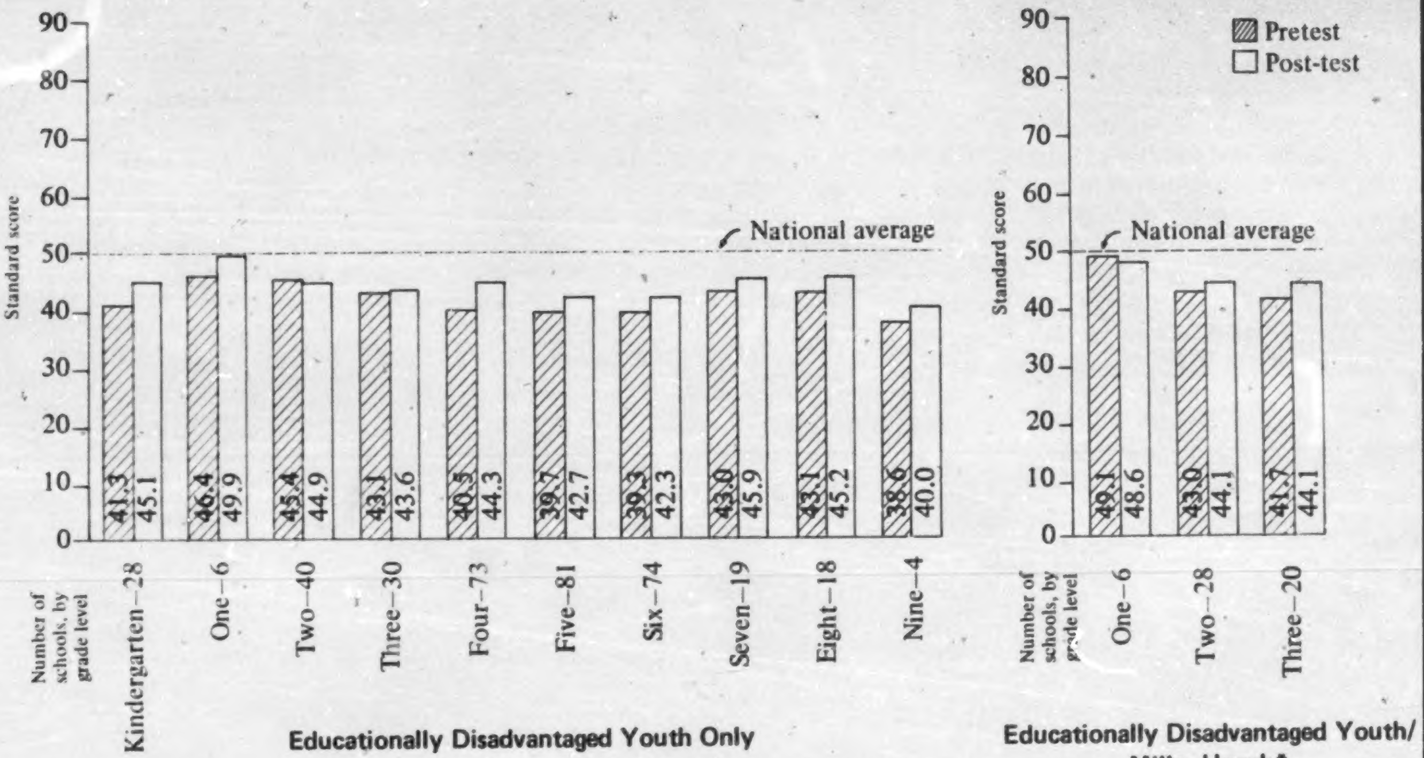
*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

TABLE 25

Average Months of Gain in Language Grade Equivalent Scores for Each Month of Language Instruction for EDY Funded Programs, 1974-75

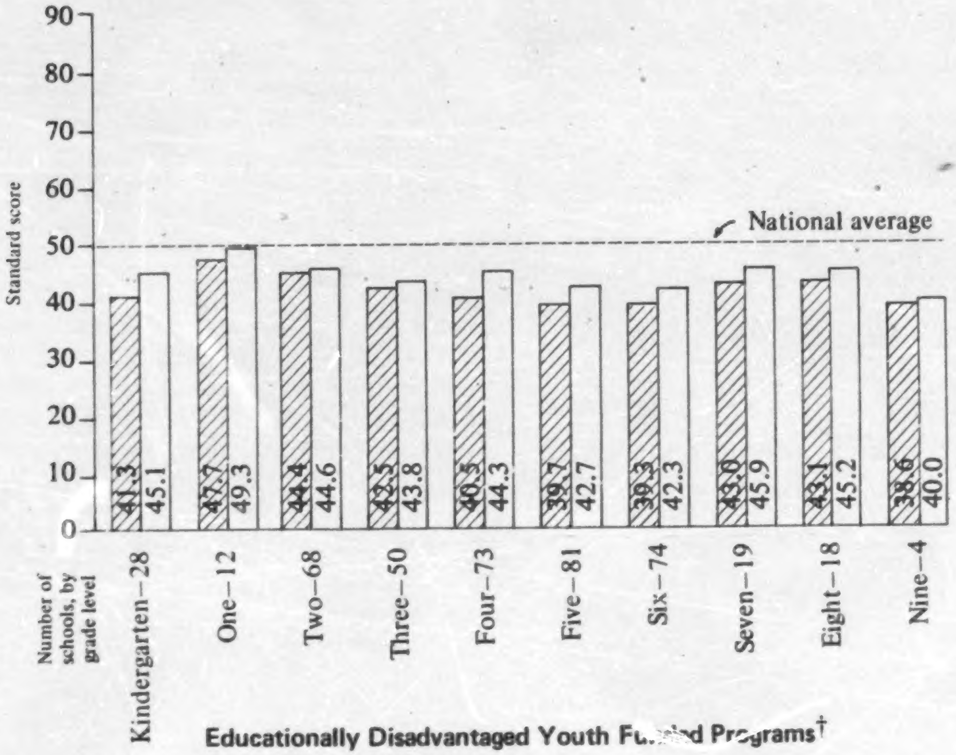
Funding source	Average months of gain for each month of instruction (and number of schools), by grade level 1	2	3	4	5	6	7	8
EDY only	1.2 (4)	1.6 (5)	1.2 (6)	1.5 (14)	.9 (16)	1.2 (18)	1.1 (6)	.8 (5)
EDY/Miller-Unruh*	1.3 (3)	2.1 (4)	1.3 (4)					
Weighted average (Total number of programs)	1.3 (1)	1.9 (9)	1.3 (10)	1.5 (14)	.9 (16)	1.2 (18)	1.1 (6)	.8 (5)

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.



Educationally Disadvantaged Youth Only

Educationally Disadvantaged Youth/ Miller-Unruh*



Educationally Disadvantaged Youth Funded Programs†

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*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

†A weighted summary of all combinations of funding sources shown above.

Fig. 12. Weighted average pretest and post-test standard scores in mathematics achievement, by grade level, for schools participating in educationally disadvantaged youth funded programs, 1974-75

and two (see Appendix A-7). Although limited English speaking students are making gains, they are performing below fluent English speaking students (see Appendix A-7). Data for grades seven, eight, and nine should be interpreted with considerable caution, due to the small sample size.

Multicultural education. During 1974-75 there were 718,803 students participating in multicultural education in 2,505 schools. Student outcomes of the multicultural component could not be adequately determined because of the lack of appropriate instrumentation. Consequently, the only statewide results which can be reported derive from the schools' self-reports on achievement of program objectives and effectiveness of program activities.

The multicultural education objectives generally were related to changes in performance or behavior of students and were related to such end results as interaction of various ethnic groups, knowledge of ethnic group contributions, more positive attitudes, and a greater understanding and acceptance of other cultures. Emphasis was placed on increased intergroup acceptance, interaction, awareness, or appreciation of group differences. The acquisition of knowledge—that is, knowledge of the contribution of the different groups to society, ethnic facts, cultural heritage, and characteristics of the various groups—was also stressed.

Implementation of the multicultural component relied on activities outside the classroom as well as within it. For example, approximately 70 percent of the responses indicated that minority persons in the community served as role models when they were employed as aides, teachers, or resource personnel.

The activities reported to be most effective included experiences provided through assemblies, fairs, holidays and celebrations, use of multiethnic materials, and classroom discussions. There was a direct relation between the frequency of activities included in objectives and their effectiveness as rated by program personnel. Thirty-nine percent of the reports indicated that their components were based on a skills continuum. According to program reports, the most effective materials used were films and filmstrips, books, songs, demonstrations and visual aides, and learning units developed in the classroom.

Cocurricular or extracurricular activities dealing with ethnic differences were provided through holiday programs and celebrations and incorporated food, music, art, and dance. Integration of multicultural concepts with other aspects of the curriculum was mentioned by many projects. Most activities were rated as "effective" or as "very effective," with the ratings showing that the most effective activities were use of multicultural materials, group discussions, and cultural programs.

TABLE 26

Average Months of Gain in Mathematics Grade Equivalent Scores for Each Month of Mathematics Instruction for EDY Funded Programs, 1974-75

	Average months of gain for each month of instruction (and number of schools), by grade level							
Funding source	1	2	3	4	5	6	7	8
EDY only	1.1 (10)	1.1 (35)	.9 (36)	1.0 (53)	1.0 (51)	1.0 (49)	1.3 (14)	1.0 (11)
EDY/Miller-Unruh*	1.3 (6)	1.1 (17)	1.0 (15)					
Weighted average	1.2 (16)	1.1 (52)	.9 (51)	1.0 (53)	1.0 (51)	1.0 (49)	1.3 (14)	1.0 (11)

*NOTE: Miller-Unruh funding was present in these schools, and such funding was used only for reading.

V. ESEA Title I Programs for Handicapped Students and Neglected and Delinquent Youths

During 1974-75, ESEA Title I grants to state agencies served almost 76,000 students qualifying for compensatory education programs. These programs included 61,049 children of migrant workers, 4,681 handicapped children in special schools operated by the Department of Education and in state hospitals operated by the Department of Health, 8,363 neglected and delinquent youth in institutions, 1,726 delinquents in institutions operated by the California Youth Authority, and a small number of felons in institutions operated by the California Department of Corrections. (A separate evaluation report on migrant education will include information regarding services to these students.)

Programs for Handicapped Students

Special Schools Programs

Six special state schools administered by the Department of Education received ESEA Title I funds during 1974-75 to augment instructional programs for the blind, deaf, and neurologically handicapped. A total of 1,118 handicapped students in special schools participated in augmented instructional programs funded by Title I. Of that number, 112, or 10 percent, were blind; 906, or 81 percent, were deaf; and 100, or 9 percent, were neurologically handicapped. The number of student participants by age range are shown in Table 27. Programs were in operation between 184 and 206 school days. Participants in the schools for neurologically handicapped students attended classes between three and nine months. Students in schools for the deaf and the blind attended classes for the full academic school year.

Programs at the several schools served students when local educational agencies were unable to meet their specific educational needs. Services included comprehensive diagnostic evaluations and counseling services for parents and families of handicapped students. The schools also participated in cooperative training programs with the University of California and California State University and Colleges systems in professional internships and teacher training.

TABLE 27

Number of Handicapped Students Participating in ESEA Title I Programs in Special Schools, 1974-75

Grade level	Number of students participating		
	School for the Blind	Schools for the Deaf	Schools for the Neurologically Handicapped
Kindergarten through grade six	42	207	---
Junior high	32	172	---
Senior high	3	421	---
Ungraded	35	106	100
Total	112	906	100

Funding provided by ESEA Title I enabled the several special schools to supplement their instructional programs in reading, language, and mathematics for the identified target students. Staff training, auxiliary services, and parent participation activities were adjusted to meet the students' unique needs and circumstances. Program effectiveness was determined through commercially available standardized tests, locally developed criterion-referenced measures, and observational techniques.

Programs Administered by the California Department of Health

ESEA Title I appropriations to the California Department of Health provided for the establishment of supplementary educational components in state and local health treatment programs. A total of 3,563 handicapped students participated in these activities. Of the student participants 2,236 or 62.8 percent were developmentally disabled, those whose special needs resulted from such functional impairments as emotional stress, psychosis, or drug abuse; and 1,327 or 37.2 percent were mentally disabled. Compounding these functional limitations for many students were secondary handicaps affecting vision, hearing, ambulation, and metabolism. Skills required for normal functioning ranged from a developmental age of one year to late adolescence. Academically, because of the severe nature of their emotional disorders, the students' learning difficulties centered around reading and listening, understanding words and symbols, and writing and speaking.

The Department of Health's programs were operated in 11 state mental hospitals and 17 community mental health facilities geographically distributed throughout the state. They operated between 200 and 365 days, with an average period of attendance of nine to 12 months for the developmentally disabled, and five to eight months for the mentally disabled.

The State Department of Education officials provided support in the form of general supervision, coordination, monitoring, and consulting services, while local coordinators provided program development, implementation, and evaluation services.

The goal of the programs was to raise the participants to a level of independence. All ESEA Title I programs administered by the Department of Health emphasized language development as the primary component, with activities in staff development and intergroup relations as support components; in a few facilities, participant abilities permitted the use of mathematics as a component. Program effectiveness was measured using either rate of change per unit time in attendance or criterion standards for preestablished objectives. Significant improvement was made in all components. The California Department of Health publication, *Learn, Compensatory Education Report 1974-75,* contains greater detail of these programs and their results.

Other Programs for Handicapped Students

Two additional programs, that at the Neuropsychiatric Institute at the University of California, Los Angeles, and that at Clearwater Ranch, Mendocino County, also received monies from ESEA Title I handicapped funding. Both of these programs were initiated in 1974-75 and served a small number of students with severe handicaps.

Programs for Neglected and Delinquent Youth

ESEA Title I programs served identified neglected and/or delinquent students in a variety of special institutions. The programs included those administered by the California Youth Authority, the Department of Corrections, and local educational agencies. While complying with conditions necessarily imposed by the institutions, each of the agencies was required to develop a comprehensive educational plan for its use of ESEA Title I funds; this plan included both instructional and instructional-support services for the students served.

Local Educational Agency Programs

In the 1974-75 school year, 8,363 ESEA Title I students were served in 154 programs for the neglected and delinquent administered at the local district or county levels. The number and percent of students by grade span and type of institution is presented in the appendix. Findings indicated that proportionally more of the neglected student population in public and nonpublic school programs were served in preschool through grade nine, while the majority of delinquent youth were reported in grades ten, eleven, and twelve and in ungraded high school programs.

The average length of enrollment for neglected and delinquent students varied from less than one month to more than 19 months in both public and private agencies, with an average duration of 7.1 months for the neglected and 5.2 months for delinquent students.

The primary objectives of most programs for neglected and delinquent youth were to raise academic achievement and to promote attitudinal changes toward themselves, their peers, and the larger society. The most frequently stated objectives included improving basic study skills, providing successful experiences, developing a more positive attitude, and reducing the recurrence and severity of disciplinary problems. To achieve program objectives, staffs in the majority of institutions concentrated on counseling and on a diagnostic, prescriptive instructional approach related to individual student needs.

Since the attainment of objectives was dependent on informed program personnel, most facilities developed active inservice training for their professional and paraprofessional staff. These activities were designed to complement the intent of the programs by emphasizing instructional diagnostic and prescriptive methods, use of new techniques and materials, problems of neglected and delinquent youth, and ways of providing a more effective transition for the student returning to regular school. These areas were addressed in workshops, orientation sessions, visits to other programs, conference attendance demonstrations, and work with support service personnel. Regularly scheduled meetings for on-site staff were reported by a majority of the programs.

Programs generally reported improved student performance in instructional areas, although the interval between pretesting and post-testing was frequently too short, and the numbers of students at particular grade levels were too small to allow any but the most tentative conclusions. Student results other than academic gains were reported by many programs and included increased ability to communicate with staff and peers, increased overall motivation, and application of basic skills to areas other than reading and math. Also mentioned were reduced referrals to the courts and less need for administrative discipline. For older students, more interest in vocational options was cited as a result of career programs.

Programs Administered by the California Youth Authority and the California Department of Corrections

ESEA Title I funds are allocated each year for qualifying students committed to the California Youth Authority (CYA) from both juvenile and criminal courts and for those committed to the Department of Corrections from criminal courts. As an average, students are between sixteen and twenty years of age and have shown behavior which frequently includes a history of poor school experience. The reading levels of approximately 70 percent of the students in the CYA institutions are three or more years below their age-grade level; more than 85 percent are three or more years retarded in mathematics skills. Further, approximately 28 percent of the CYA participants have come to be regarded as high school dropouts.

The challenge for ESEA Title I programs administered by the California Youth Authority has been to motivate students, to raise their academic achievement levels, and to guide them into productive and responsible pursuits.

During 1974-75, ESEA Title I programs served 1,726 students in 12 institutions operated by the California Youth Authority and students in three institutions operated by the California Department of Corrections.

The emphasis in ESEA Title I programs in CYA institutions was upon instruction in reading, language, and mathematics, using diagnostic/prescriptive methods. Instructional methods included small group instruction, use of commercially developed media materials, and individual tutoring. Four schools used the individualized manpower training system approach to academic skill development. Other institutions implemented locally developed systems designed to meet the needs of the students and the requirements of their respective facilities. Use of teaching assistants and/or student aides was reported as an integral part of each ESEA Title I program.

Although the academic performance of students by CYA institution varied widely, it was found that students typically achieved more than one month's gain in reading, language, and mathematics for each month of participation in the program. Student gains in reading ranged from .8 to 2.5 months per month of instruction; from 1.9 to 4.3 months' gain in language development; and from .8 to 3.8 months' gain in mathematics.

Schools reported that students in CYA institutions demonstrated reduced frustration and better attitudes toward school as a result of more systematized diagnostic-prescriptive instruction. Schools which placed heavy emphasis on programmed learning reported that students showed an increase in autonomous learning, better work habits, and better classroom conduct. Most of the schools developed diverse programs to meet the needs of students at different remedial levels.

Several CYA programs reported that there was more active participation on the part of the total ESEA Title I staff in planning the total program. This led to better cooperation among staff and better services to students.

VI. Summary of Findings and Their Implications

The findings presented in this section of the report were based on a review and analysis of the data gathered by the State Department of Education regarding those schools participating in the early childhood education (ECE) reform effort and those with ESEA Title I and educationally disadvantaged youth (EDY) programs in 1974-75. The evaluation findings are arranged according to this order: institutional change; student achievement; participants in ECE, ESEA Title I, and EDY; expenditure patterns; and the evaluation process.

Institutional Changes

Evidence of institutional change in schools within the ECE reform effort was gathered from the quality ratings of the school level plans, quality reviews conducted during the monitor and review (MAR) school visitations, and the product evaluation reports prepared by schools in which they described and evaluated their programs at the end of the year. The changes in the schools (institutional change) were evident from these 1974-75 findings:

- The plan rating information showed that all the schools were doing systematic planning, with more than 75 percent conducting quality needs assessments.
- The plan rating information showed that 80 percent of the schools were able to write quality goals, and 70 percent were able to develop quality objectives.
- The product evaluation report information showed a 54 percent increase in number of participants in parent participation component activities and a 55 percent increase in the number of participants in parent education component activities over the 1973-74 data, with a 30 percent increase in participating schools.
- The monitor and review (MAR) data showed that of the 913 ECE schools visited, more than 87 percent had individualized, diagnostic instructional programs operating at or above the satisfactory level in all phases of reading and mathematics.
- The MAR data showed that more than 85 percent of the schools had staff development programs which systematically were meeting the assessed needs of teachers, paid aides, and administrators at or above the satisfactory level.
- The self-report data in the product evaluation report and in-depth study information indicated that local evaluation was occurring.

The clear implication from these findings was that ECE schools were making major changes throughout many areas of their programs, indicating in turn basic changes in the institutions.

Three areas of institutional change, although rated well, were sufficiently below a level of quality to warrant further examination:

1. More than 25 percent of the 913 ECE schools visited had some language development areas related to individualized instruction which were below the satisfactory level. Additional data indicated a lack of clarity existed regarding the meaning of language development, and the data also indicated that instructional materials and measurement tools were lacking.
2. Twenty-three percent of the 913 ECE schools visited were rated below the satisfactory level in parent participation in program evaluation. This indicated a need for more effort to involve parents in this specific activity.
3. The inservice programs in 27 percent of the ECE schools visited were rated below the satisfactory level in meeting the assessed needs of volunteers. This finding indicated a need for increased attention to this area, particularly since the number of volunteers in schools has increased so greatly.

Student Achievements

In student reading and mathematics achievement, the results of programs developed with all funding combinations equaled or exceeded last year's achievement, which was an average gain of 11 months' growth for 10 months in school. In addition, the pre-post standardized testing showed that:

- ECE only schools attained reading achievement above the national average on post-test scores in all grades served.

- Schools in the ECE reform effort tended to have higher gain scores in all achievement areas than schools not included in the effort (ESEA Title I and/or EDY only).
- Schools with ESEA Title I and EDY funded programs maintained month-to-month growth when historically such schools would only be expected to gain seven months in ten months of instruction.
- Schools entering ECE for the first time in 1974-75 had significantly greater achievement, statistically, than the original schools in 1973-74 in all areas except second grade mathematics.

In addition the California state assessment testing showed that students in the ECE process achieved significantly higher, statistically, than did matched groups of students not in the program.

Participants in ECE, ESEA Title I, and EDY

A total of 806,752 students were served through the combined (ECE, ESEA Title I, EDY) funding sources in 1974-75. Sixty-five percent of the students were enrolled in kindergarten through grade three (ECE, ESEA Title I, and EDY); 23 percent, in grades four through six (ESEA Title I and EDY); and 12 percent, in grades seven through twelve (ESEA Title I and EDY). More students received services in reading than in any other instructional component. A duplicated count showed that 770,000 participating students were included in reading instruction, 580,000 in language development, and 717,000 in mathematics. Large numbers of volunteers were working in the programs: 67,000 adults contributed 200,000 hours per week, and 61,000 students contributed 156,000 hours per week.

Expenditure Patterns

Examination of the final fiscal reports from a limited sample of districts showed differences in the patterns of expenditures within ECE, ESEA Title I, and EDY. In ECE, 55 percent of the funds went to pay classified salaries, and 21 percent of the funds were used for certificated salaries. In ESEA Title I programs, 43 percent of the funds were used for classified salaries and 33 percent for certificated salaries. In EDY programs, 10 percent of the funds went to pay classified salaries, while 71 percent of the funds were used for certificated salaries. The need for an analysis of all the expenditure data was implied by this finding, and that analysis is currently being made.

Evaluation Process

As indicated in "Procedures, Instrumentation, and Limitations," problems were identified in the evaluation instrumentation. The Department has already made the following changes for 1975-76:

1. The plan rating instrument has been redesigned to correspond more closely to the planning process. Also, inter-rater reliability calculations are being made on the plan raters.
2. In light of the concerns raised in 1974-75, the monitor and review (MAR) instrument has been redesigned to make it more functional and to allow separate measurements of implementation according to the school's plan, progress toward restructuring or revitalization, and quality of the program. Measurements of inter-rater reliability and additional inservice training in the instrument's use are being pursued.
3. The instrument used to assess program compliance has been reduced in size, and it focuses on statutory requirements.
4. The progress implementation report has been eliminated, since it was a requirement which seemed to report data of little usefulness.
5. The product evaluation report has been reduced in size and will specify only enumeration data, data from standardized test results, and data on the school's accomplishment of objectives. All standardized test results are to be reported in mean raw scores.
6. In-depth studies, with less dependence on self-report data, will be done only for selected components and processes, emphasizing the processes of institutional change.
7. Plans are being made to provide longitudinal data in the continuing evaluation process.

There was difficulty in measuring gains of limited-English and non-English speaking students, due to the lack of appropriate instrumentation. The Department of Education is currently engaged in developing such instrumentation, but it is not scheduled to be completed until 1977. The same problem of pre-post gain measurement will therefore exist in the 1975-76 report.

Because the consolidated evaluation format provided comprehensive program information instead of isolated information for each funding source, the continued use of this format is indicated for the 1975-76 consolidated evaluation report. This approach, with the previously specified modifications, should provide even fuller data for 1975-76.

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